



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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Subject: Region IX Preliminary Remediation Goals (PRGs) First Half 1995

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To: PRG Table Mailing List

Please find the update to the Region IX PRG table. The table has been revised to reflect the most current EPA toxicological and risk assessment information. Updates to EPA toxicity values were obtained from IRIS through December 1994 and HEAST through November 1994.

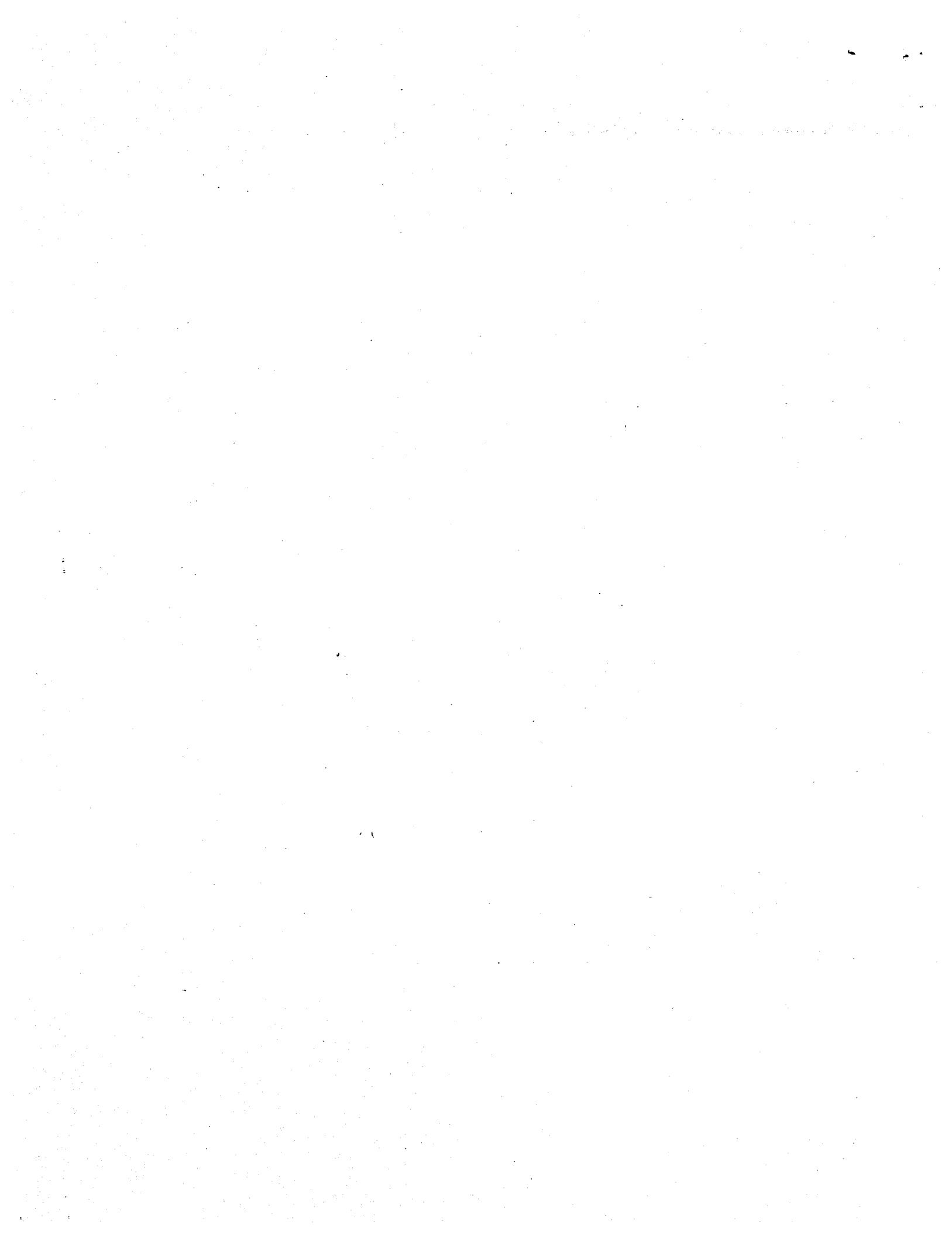
Preliminary Remediation Goals are "evergreen" and will change as new methodologies and parameters are developed. Notable changes in this version of the update include the methods for relating contaminant concentrations in soil to contaminant concentrations in the breathing zone. The dispersion term for the inhalation of volatiles and fugitive dusts emitted from contaminated soils is modeled using an updated dispersion model (AREA-ST, the updated version of the Office of Air Quality Planning and Standards, Industrial Source Complex Model, ISC2). This leads to small changes in the volatilization factors (VF_s) and PEF, and consequently, small changes in the estimate of soil PRGs for volatile contaminants.

The PRG table provides useful risk-based information for Region IX risk assessors and managers. It is noted that California risk-based PRGs ("CAL-Modified PRGs") may differ significantly from the federal values (significance is defined here as differing by a factor of four or more). Where "CAL-Modified PRGs" are significantly more restrictive than the federal numbers, they are also presented in the tables and should be used within the State of California.

In general, PRGs should be used as a predictor of single-contaminant risk estimates for a specific environmental media (e.g. soil, air, and tap water). However, multiple contaminant risks can also be estimated by summing the fractional contribution of each contaminant (see Screening Risk below). This procedure requires gathering additional information, either by downloading the table to display the hidden columns or by using the equations presented in the text for calculating additional concentration terms not provided in the print out.

A contaminant concentration that exceeds a PRG level does not, in itself, mean that there is an unacceptable health threat. However, exceedances should be evaluated further. It is recommended that the reader verify the numbers with a toxicologist because the toxicity/exposure information in the table may contain errors or default assumptions that need to be refined based on further evaluation.

If you are not currently on the PRG mailing list, but would like to be, please make the request through EPA's project manager working on your site. Or, simply download the file (PRG1ST95.ZIP) from California Regional Water Board's BBS [(510) 286-0404]. If you find an error please send me a note via fax at (415) 744-1916.



DISCLAIMER

Preliminary remediation goals (PRGs) focus on common exposure pathways and may not consider all exposure pathways encountered at CERCLA/RCRA sites (Exhibit 1-1). PRGs do not consider impact to groundwater or address ecological concerns. PRGs are specifically not intended as a (1) stand-alone decision-making tool, (2) as a substitute for EPA guidance for preparing baseline risk assessments, or (3) a rule to determine if a waste is hazardous under RCRA.

The guidance set out in this document is not final Agency action. It is not intended, nor can it be relied upon to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow the guidance provided herein, or act at variance with the guidance, based on an analysis of specific circumstances. The Agency also reserves the right to change this guidance at any time without public notice.

1.0 INTRODUCTION

The Region IX PRG Table combines EPA toxicity values (updated biannually) with reasonable maximum exposure (RME) factors to estimate concentrations in environmental media (e.g. soil, air, and water) that are protective of humans, including sensitive groups, over a lifetime of exposure. Concentrations above these levels would not automatically designate a site as "dirty" or trigger a response action. However, exceeding a PRG suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate. PRGs are "evergreen" and will change as new methodologies and parameters are developed.

PRG concentrations presented in the Tables can be used to screen pollutants in environmental media, trigger further investigation, and provide an initial cleanup goal if applicable. When considering PRGs as initial cleanup goals, residential concentrations should be used for maximum beneficial uses of a property. Industrial concentrations for soil only are included in the table as an alternative goal, but industrial concentrations should not be used for screening a site. They are meant to provide the manager with an alternative preliminary goal for sites zoned industrial.

Before applying PRGs as screening tools or initial cleanup goals, the user of the table should consider whether the exposure pathways and exposure scenarios at the site are fully accounted for in the PRG calculation. Region IX PRG concentrations are based on exposure pathways for which generally accepted methods, models, and assumptions have been developed (i.e. ingestion, dermal contact, and inhalation) for specific land-use conditions and do not consider impact to groundwater or ecological receptors (see Developing a Conceptual Site Model below).

EXHIBIT 1-1
TYPICAL EXPOSURE PATHWAYS BY MEDIUM
FOR RESIDENTIAL AND INDUSTRIAL LAND USES*

EXPOSURE PATHWAYS, ASSUMING:		
MEDIUM	RESIDENTIAL LAND USE	INDUSTRIAL LAND USE
Ground Water	<i>Ingestion from drinking</i>	Ingestion from drinking
	<i>Inhalation of volatiles</i>	Inhalation of volatiles
	Dermal absorption from bathing	Dermal absorption
Surface Water	<i>Ingestion from drinking</i>	Ingestion from drinking
	<i>Inhalation of volatiles</i>	Inhalation of volatiles
	Dermal absorption from bathing	Dermal absorption
	Ingestion during swimming	
Soil	Ingestion	<i>Ingestion</i>
	<i>Inhalation of particulates</i>	<i>Inhalation of particulates</i>
	<i>Inhalation of volatiles</i>	<i>Inhalation of volatiles</i>
	Exposure to indoor air from soil gas	Exposure to indoor air from soil gas
	Exposure to ground water contaminated by soil leachate	Exposure to ground water contaminated by soil leachate
	Ingestion via plant uptake	Inhalation of particulates from trucks and heavy equipment
	<i>Dermal absorption</i>	<i>Dermal absorption</i>

Footnote:

*Exposure pathways considered in the PRG calculations are indicated in boldface italics.

2.0 READING THE PRG TABLE

2.1 General Considerations:

With the exceptions described below, PRGs are health-based concentrations that correspond to either a one-in-one million (10^{-6}) cancer risk or a chronic hazard quotient of one, whichever is lower. PRG concentrations based on cancer and noncancer concerns are indicated by "ca" and "nc", respectively. Cancer-causing agents may have additional non-cancer PRGs not listed in the Tables. These can be obtained by downloading file (PRG1ST95.ZIP) from California Regional Water Board's Bulletin Board System at [(510)286-0404)] or using the calculations provided below.

In general, PRG concentrations in the table are risk-based but for soil there are two important exceptions: 1) for several volatile chemicals PRGs are based on soil saturation equation ("sat") (see below), and 2) for relatively less toxic inorganic and semivolatile contaminants, a non-risk based "ceiling limit" concentration is given as 10^{+5}mg/kg "max". PRG concentrations that are not risk-based (i.e. either "sat" or "max") should be segregated before screening multiple pollutant risks.

2.2 Toxicity Values:

EPA toxicity values, known as noncarcinogenic reference doses (RfD) and carcinogenic slope factors (SF) were obtained from IRIS through December 1994, HEAST through November 1994, and ECAO-SF Cincinnati. The priority among sources of toxicological constants used are as follows: (1) IRIS (indicated by "i"), (2) HEAST ("h"), (3) ECAO ("e"), and (4) withdrawn from IRIS or HEAST and under review ("x").

Route-to-route extrapolations ("r") were frequently used when there were no toxicity values available for a given route of exposure. Oral cancer slope factors ("oSF") and reference doses ("oRfD") were used for both oral and inhaled exposures for organic compounds lacking inhalation values. Also, inhalation slope factors ("iSF") and inhalation reference doses ("iRfD") were frequently used for both inhaled and oral exposures for organic compounds lacking oral values. An additional route extrapolation is the use of oral toxicity values for evaluating dermal exposures. Although route-to-route methods are a useful screening procedure, the appropriateness of these default assumptions for specific contaminants should be verified by a toxicologist.

2.3 Soil Factors:

Chemical-specific information for soils, volatilization factors ("VF_s") and skin absorption factors ("ABS"), are listed in the table to provide additional assumptions used to calculate soil PRGs. For volatile chemicals, the "VF_s" term was incorporated into the PRG equations to address long-term inhalation exposures. Volatile organic chemicals (VOCs) are indicated by "1" in the VOC column of the Table and are defined as those chemicals having a Henry's Law constant greater than 10^5 (atm-m³/mol) and a molecular weight less than 200 g/mole).

Chemical-specific soil "ABS" values are provided for arsenic, cadmium, pentachlorophenol, PCBs, and dioxin as recommended by EPA's Office of Research and Development (1994) for the evaluation of contaminant absorption through the skin. Otherwise, default skin absorption fractions are assumed to be 0.01 and 0.10, for inorganics and organics, respectively. Although it is debatable whether a default of 0.10 skin absorption is appropriate for volatile contaminants in soils, it should be noted that in practical terms, this assumption makes little difference in the soil PRG because the risk driver for volatiles is generally based on the soil-to-air pathway and not ingestion or skin contact.

3.0 USING THE PRG TABLE

The decision to use PRGs at a site will be driven by the potential benefits of having risk-based concentrations in the absence of site-specific risk assessments. The original intended use of PRGs was to provide initial cleanup goals for individual chemicals given specific medium and land-use combinations (see RAGS Part B, 1991), however risk-based PRGs actually have several uses in addition to providing initial goals. These include:

- Screening sites to determine further evaluation
- Prioritizing areas of concern at megasites (e.g. federal facilities)
- Calculating risks associated with multiple contaminants

A few basic procedures are recommended for using PRGs properly. These are briefly described below. Potential problems with the use of PRGs are also identified.

3.1 Developing a Conceptual Site Model

The primary condition for use of PRGs is that exposure pathways of concern and conditions at the site match those taken into account by the PRG framework. Thus, it is always necessary to develop a conceptual site model (CSM) to identify likely contaminant source areas, exposure pathways, and potential receptors. This information can be used to determine the applicability of PRGs at the site and the need for additional information. For those pathways not covered by PRGs, a risk assessment specific to these additional pathways may be necessary. Nonetheless, the PRG lookup values will still be useful in such situations for focusing further investigative efforts on the exposure pathways not addressed.

To develop a site-specific CSM, perform an extensive records search and compile existing data (e.g. available site sampling data, historical records, aerial photographs, and hydrogeologic information). Once this information is obtained, CSM worksheets such as those provided in ASTM's *Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites* (1994) can be used to tailor the generic worksheet model to a site-specific CSM. The final CSM diagram represents linkages among contaminant sources, release mechanisms, exposure pathways and routes and receptors. It summarizes our understanding of the contamination problem.

As a final check, the CSM should answer the following questions:

- Are there potential ecological concerns?
- Is there potential for land use other than those covered by the PRGs (that is, residential and industrial)?
- Are there other likely human exposure pathways that were not considered in development of the PRGs (e.g. impact to groundwater, local fish consumption; raising beef, dairy, or other livestock)?
- Are there unusual site conditions (e.g. large areas of contamination, high fugitive dust levels, potential for indoor air contamination)?

If any of these four conditions exist, the PRG may need to be modified to reflect this new information. Suggested references for evaluating pathways not currently evaluated by Region IX PRG's are presented in Exhibit 3-1.

EXHIBIT 3-1
**SUGGESTED READINGS FOR EVALUATING SOIL CONTAMINANT
 PATHWAYS NOT CURRENTLY ADDRESSED BY REGION IX PRGs**

EXPOSURE PATHWAY	REFERENCE
Migration of contaminants to an underlying potable aquifer	<i>Technical Background Document for Soil Screening Guidance - Review Draft</i> (USEPA 1994c)
Ingestion via plant uptake	<i>Technical Support Document for Land Application of Sewage Sludge</i> (USEPA 1992a)
Ingestion via meat or dairy products	<i>Estimating Exposure to Dioxin-Like Compounds - Review Draft</i> (1994d)
Inhalation of volatiles that have migrated into basements	<i>Technical Background Document for Soil Screening Guidance - Review Draft</i> (USEPA 1994c)
Terrestrial environmental pathways	<i>Role of the Ecological Risk Assessment in the Baseline Risk Assessment</i> (USEPA 1994e)

3.2 Background Levels Evaluation

A necessary step in determining the usefulness of Region IX PRGs is the consideration of background contaminant concentrations. EPA may be concerned with two types of background at sites: naturally occurring and anthropogenic. Natural background is usually limited to metals whereas anthropogenic (i.e. human-made) background includes both organic and inorganic contaminants.

Generally EPA does not clean up below natural background. If natural background concentrations are higher than the PRGs, the generic PRGs may not be the best tool for site decisionmaking. Or, an adjustment of the PRG may be needed. For example, naturally occurring arsenic frequently is higher than the soil PRG set equal to a one-in-one-million cancer risk (the point of departure), thus an alternative PRG for arsenic is provided in the lookup tables based on non-cancer endpoints. Because of the problems associated with adjusting PRGs to an alternate risk level, this procedure is not recommended without first consulting a staff toxicologist at state and/or federal regulatory agencies.

Where anthropogenic background levels exceed PRGs and EPA has determined that a response action is necessary and feasible, EPA's goal will be to develop a comprehensive response to the widespread contamination. This will often require coordination with different authorities that have jurisdiction over the sources of contamination in the area.

3.3 Risk Screening

A suggested stepwise approach for screening sites with PRGs is as follows:

- Perform an extensive records search and compile existing data
- Identify site contaminants in the PRG Table. Record the PRG concentrations for various media and note whether PRG is based on cancer risk (indicated by "ca") or

noncancer hazard (indicated by "nc"). Segregate cancer PRGs from non-cancer PRGs and exclude (but don't eliminate) non-risk based PRGs ("sat" or "max").

- For cancer risk estimates, take the site-specific concentration (maximum or 95 UCL) and divide by the PRG concentrations that are designated for cancer evaluation ("ca"). Multiply this ratio by 10^{-6} to estimate chemical-specific risk. For multiple pollutants, simply add the risk for each chemical :

$$Risk = [(\frac{conc_x}{PRG_x}) + (\frac{conc_y}{PRG_y}) + (\frac{conc_z}{PRG_z})] \times 10^{-6}$$

- For non-cancer hazard estimates. Divide concentration term by its respective non-cancer PRG designated as "nc" and sum the ratios for multiple contaminants. [Note that carcinogens may also have an associated non-cancer PRG that is not listed in the printed copy of the table and these will also need to be obtained in order to complete the non-cancer evaluation.] The non-cancer ratio represents a hazard index (HI). A hazard index of 1 or less is generally considered safe . A ratio greater than 1 suggests further evaluation:

$$Hazard\ Index = [(\frac{conc_x}{PRG_x}) + (\frac{conc_y}{PRG_y}) + (\frac{conc_z}{PRG_z})]$$

For more information on screening site risks, the reader should contact EPA Region IX's Technical Support Section.

3.4 Potential Problems:

As with any risk-based tool, the potential exists for misapplication. In most cases the root cause will be a lack of understanding of the intended use of Region IX PRGs. In order to prevent misuse of PRGs, the following should be avoided:

- Applying PRGs to a site without adequately developing a conceptual site model that identifies relevant exposure pathways and exposure scenarios,
- Not considering background concentrations when choosing PRGs as cleanup goals,
- Use of PRGs as cleanup levels without the nine-criteria analysis specified in the National Contingency Plan (or, comparable analysis for programs outside of Superfund),
- Use of PRGs as cleanup levels without verifying numbers with a toxicologist,
- Use of antiquated PRG Tables that have been superseded by more recent publications, and
- Not considering the effects of additivity when screening multiple chemicals.

4.0 TECHNICAL SUPPORT DOCUMENTATION

PRGs consider human exposure hazards to chemicals from contact with contaminated soils, air, and water. The emphasis of the PRG equations and technical discussion are aimed at developing initial goals for soils, since this is an area where few standards exist. For air and water, additional reference concentrations or standards are available for many chemicals (e.g. non-zero MCLGs, AWQC, and NAAQS) and consequently the discussion of these media are brief.

4.1 Inhalation of Volatiles and Fugitive Dusts:

Agency toxicity criteria indicate that risks from exposure to some chemicals via inhalation far outweigh the risk via ingestion; therefore soil PRGs have been designed to address this pathway as well. The models used to calculate PRGs for inhalation of volatiles/particulates are updates of risk assessment methods presented in RAGS Part B (USEPA 1991a) and are consistent with the *Technical Background Document for Soil Screening Guidance - Review Draft* (USEPA 1994c).

To address the soil-to-air pathways the PRG calculations incorporate volatilization factors (VF_s) for volatile contaminants and particulate emission factors (PEF) for nonvolatile contaminants. These factors relate soil contaminant concentrations to air contaminant concentrations that may be inhaled on-site. The VF_s and PEF equations can be broken into two separate models: an emission model to estimate emissions of the contaminant from the soil and a dispersion model to simulate the dispersion of the contaminant in the atmosphere.

It should be noted that the box model in RAGS Part B has been replaced with a dispersion term (Q/C) derived from a modeling exercise using meteorological data from 29 locations across the United States because the box model may not be applicable to a broad range of site types and meteorology and does not utilize state-of-the-art techniques developed for regulatory dispersion modeling. The dispersion model for both volatiles and particulates is the AREA-ST, an updated version of the Office of Air Quality Planning and Standards, Industrial Source Complex Model, ISC2. However, different Q/C terms are used in the VF and PEF equations. Los Angeles was selected as the 90th percentile data set for volatiles and Minneapolis was selected as the 90th percentile data set for fugitive dusts (USEPA 1994c). A default source size of 0.5 acres was chosen for the PRG calculations. This differs from the default area source (30 acres) assumed in *Technical Background Document for Soil Screening Guidance - Review Draft* (USEPA 1994c). Based on communications with project managers and technical staff, an assumed source size of 30 acres was considered inappropriate for most sites. In addition, these air models are already biased towards predicting long-term exposure concentrations in excess of those likely to occur. If unusual site conditions exist such that the area source is substantially larger than the default source size assumed here, an alternative Q/C could be applied (see USEPA 1994c).

Volatilization Factor for Soils

Volatile chemicals, defined as those chemicals having a Henry's Law constant greater than 10^5 (atm- m^3/mol) and a molecular weight less than 200 g/mole, were screened for inhalation exposures using a volatilization factor for soils (VF_s).

The emission terms used in the VF_s are chemical-specific and were calculated from physical-chemical information obtained from a number of sources including *Superfund Exposure Assessment Manual* (reference "1") (SEAM, EPA 1988), *Superfund Public Health Evaluation Manual* (reference "2") (EPA 1986), *Subsurface Contamination Reference Guide* (reference "3") (EPA 1990a) and *Fate and Exposure*

Data (reference "4") (Howard 1991) and are presented in Attachment A. In those cases where Diffusivity Coefficients (Di) were not provided in existing literature, Di's were calculated using Fuller's Method described in SEAM. A surrogate term was required for some chemicals that lacked physico-chemical information. In these cases, a proxy chemical of similar structure was used that may over- or underestimate the PRG for soils.

Equation 4-9 forms the basis for deriving generic soil PRGs for the inhalation pathway. The following parameters in the standardized equation can be replaced with specific site data to develop a more site-specific PRG

- Source area
- Average soil moisture content
- Average fraction organic carbon content
- Dry soil bulk density

The basic principle of the VF_s model is applicable only if the soil contaminant concentration is at or below soil saturation. Above this level the model cannot predict an accurate VF. If the PRG calculated using VF_s was greater than the calculated "sat", the PRG was set equal to "sat" in accordance with Risk Assessment Guidance for Superfund - Part B (EPA, 1991). Equation 4-10 forms the basis for deriving soil saturation concentrations.

Volatilization Factor for Tap Water

For tap water, an upperbound volatilization constant (VF_s) is used that is based on all uses of household water (e.g. showering, laundering, and dish washing). Certain assumptions were made. For example, it is assumed that the volume of water used in a residence for a family of four is 720 L/day, the volume of the dwelling is 150,000 L and the air exchange rate is 0.25 air changes/hour (Andelman in RAGS Part B). Furthermore, it is assumed that the average transfer efficiency weighted by water use is 50 percent [i.e. half of the concentration of each chemical in water will be transferred into air by all water uses].

Note: the range of transfer efficiencies extends from 30% for toilets to 90% for dishwashers.

Particulate Emission Factor for Soils

Inhalation of chemicals adsorbed to respirable particles (PM₁₀) were assessed using a default PEF equal to $1.316 \times 10^9 \text{ m}^3/\text{kg}$ that relates the contaminant concentration in soil with the concentration of respirable particles in the air due to fugitive dust emissions from contaminated soils. The relationship is derived by Cowherd (1985) for a rapid assessment procedure applicable to a typical hazardous waste site where the surface contamination provides a relatively continuous and constant potential for emission over an extended period of time (e.g. years). This may not be an appropriate assumption for all sites.

The impact of the PEF on the resultant PRG concentration (that combines soil exposure pathways for ingestion, skin contact, and inhalation) can be assessed by downloading the PRG tables and displaying the hidden columns. With the exception of specific heavy metals, the PEF does not appear to significantly affect most soil PRGs. Equation 4-11 forms the basis for deriving a generic PEF for the inhalation pathway. For more details regarding specific parameters used in the PEF model, the reader is referred to *Technical Background Document for Soil Screening Guidance - Review Draft* (December 1994).

Note: the PEF considers windborne emissions and does not consider dust emissions from traffic or other forms of mechanical disturbance.

4.2 Dermal Absorption of Contaminants in Soil:

Much uncertainty surrounds the determination of hazards associated with skin contact with soils. Thus far, chemical-specific absorption values for skin have been recommended for only five chemicals by EPA's Office of Research and Development. For all other chemicals, default absorption values for inorganics and organics are assumed to be 1 and 10 percent, respectively. An additional uncertainty is the lack of toxicity values for the dermal route. For screening purposes it is assumed that dermal toxicity values can be route-to-route extrapolated from oral values, but this may not always be an appropriate assumption and should be checked.

At 10 % skin absorption, the dermal dose is estimated to equal an ingestion dose for adults, using the best estimate default values in *Dermal Exposure Assessment: Principles and Applications* (EPA 1992). At 1 % absorption, the dermal dose is estimated to be 10% of the oral dose (i.e. based on an adult ingestion rate of 100 mg/day). Note: worker and children intake rates, 50 mg/day and 200 mg/day, respectively, yield somewhat different results.

$$\text{dermal dose} = \text{ingestion dose}$$

$$C_{SOIL} \times ABS \times AF \times SA = C_{SOIL} \times IR$$

$$ABS = \frac{(100\text{mg/day})}{[(0.2\text{mg/cm}^2\text{-day})(5000\text{cm}^2)]} = 0.10$$

4.3 Exposure Factors:

Default exposure factors were obtained primarily from RAGS Supplemental Guidance Standard Default *Exposure Factors* (OSWER Directive, 9285.6-03) dated March 25, 1991 and supplemented with more recent information from U.S. EPA's Office of Solid Waste and Emergency Response, U.S. EPA's Office of Research and Development, and California EPA's Department of Toxic Substances Control (see Exhibit 4-1).

Because contact rates may be different for children and adults, carcinogenic risks during the first 30 years of life were calculated using age-adjusted factors. Use of age-adjusted factors are especially important for soil ingestion exposures, which are higher during childhood and decrease with age. However, for purposes of combining exposures across pathways, additional age-adjusted factors are used for inhalation and dermal exposures. These factors approximate the integrated exposure from birth until age 30 combining contact rates, body weights, and exposure durations for two age groups - small children and adults. Age-adjusted factors were obtained from RAGS PART B or developed by analogy.

For soils only, noncarcinogenic contaminants are evaluated in children separately from adults. No age-adjustment factor is used in this case. The focus on children is considered protective of the higher daily intake rates of soil by children and their lower body weight. For maintaining consistency, when evaluating soils, dermal and inhalation exposures are also based on childhood contact rates.

(1) ingestion([mg·yr]/[kg·d]):

$$IFS_{adj} = \frac{ED_c \times IRS_c}{BW_c} + \frac{(ED_x - ED_c) \times IRS_a}{BW_a}$$

(2) skin contact([mg·yr]/[kg·d]):

$$SFS_{adj} = \frac{ED_c \times AF \times SA_c}{BW_c} + \frac{(ED_x - ED_c) \times AF \times SA_a}{BW_a}$$

(3) inhalation ([m³·yr]/[kg·d]):

$$InhF_{adj} = \frac{ED_c \times IRA_c}{BW_c} + \frac{(ED_x - ED_c) \times IRA_a}{BW_a}$$

4.4 PRG Equations:

The equations used to calculate the PRGs for carcinogenic and noncarcinogenic contaminants are presented in Equations 4-1 through 4-8. Calculations of PRGs are consistent with RAGS Part B (U.S. EPA 1991) but also consider updates to the RAGS Part B equations. Briefly, the methodology backcalculates a soil, air, or water concentration level from a target risk (for carcinogens) or hazard quotient (for noncarcinogens). The equations for soil combine across pathways for direct exposures (i.e. ingestion, skin contact, and inhalation). To evaluate route-specific contribution to the PRG concentration, the user can download the PRG table from California Regional Water Board's BBS mentioned above and display the hidden columns.

To calculate PRGs for volatile chemicals in soil, a chemical-specific volatilization factor is calculated per Equation 4-9. Because of its reliance on Henry's law, the VF model is applicable only when the contaminant concentration in soil water is at or below saturation (i.e. there is no free-phase contaminant present). This corresponds to the contaminant concentration in soil at which the adsorptive limits of the soil particles and the solubility limits of the available soil moisture have been reached. Above this point, pure liquid-phase contaminant is expected in the soil. The updated equation for deriving (sat) is presented in Equation 4-10.

EXHIBIT 4-1
STANDARD DEFAULT FACTORS

<u>Symbol</u>	<u>Definition (units)</u>	<u>Default</u>	<u>Reference</u>
CSFo	Cancer slope factor oral (mg/kg-d) ⁻¹	—	IRIS, HEAST, or ECAO
CSFi	Cancer slope factor inhaled (mg/kg-d) ⁻¹	—	IRIS, HEAST, or ECAO
RfDo	Reference dose oral (mg/kg-d)	—	IRIS, HEAST, or ECAO
RfDi	Reference dose inhaled (mg/kg-d)	—	IRIS, HEAST, or ECAO
TR	Target cancer risk	10 ⁻⁶	—
THQ	Target hazard quotient	1	—
BWa	Body weight, adult (kg)	70 ^a	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)
BWc	Body weight, child (kg)	15	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
AT	Averaging time - cancer (years)	70	RAGS(Part A), EPA 1989 (EPA/540/1-89/002)
SAa	25% Surface area, adult (cm ²)	5000	Dermal Assessment, EPA 1992 (EPA/600/8-91/011B)
SAc	25% Surface area, child (cm ²)	2000	Dermal Assessment, EPA 1992 (EPA/ 600/8-9/011B)
AF	Adherence factor (mg/cm ²)	0.2	Dermal Assessment, EPA 1992 (EPA/ 600/8-9/011B)
ABS	Skin absorption (unitless): — organics — inorganics	0.1 0.01	PEA, Cal-EPA (DTSC, 1994) PEA, Cal-EPA (DTSC, 1994)
IRAA	Inhalation rate - adult (m ³ /day)	20	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
IRAc	Inhalation rate - child (m ³ /day)	10	RAGS (Part A), EPA 1989 (EPA/540/1-89/002)
IRWa	Drinking water ingestion - adult (L/day)	2	RAGS(Part A), EPA 1989 (EPA/540/1-89/002)
IRWc	Drinking water ingestion - child (L/day)	1	PEA, Cal-EPA (DTSC, 1994)
IRSa	Soil ingestion - adult (mg/day)	100	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
IRSc	Soil ingestion - child (mg/day),	200	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
IRSo	Soil ingestion - occupational (mg/day)	50	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
EFr	Exposure frequency - residential (d/y)	350	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
EFo	Exposure frequency - occupational (d/y)	250	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
EDr	Exposure duration - residential (years)	30 ^b	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
EDc	Exposure duration - child (years)	6	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
EDo	Exposure duration - occupational (years)	25	Exposure Factors , EPA 1991 (OSWER No. 9285.6-03)
Age-adjusted factors for carcinogens:			
IFSadj	Ingestion factor, soils ([mg•yr]/[kg•d])	114	RAGS(Part B) , EPA 1991 (OSWER No. 9285.7-01B)
SFSadj	Skin contact factor, soils ([mg•yr]/[kg•d])	503	By analogy to RAGS (Part B)
InhFadj	Inhalation factor ([m ³ •yr]/[kg•d])	11	By analogy to RAGS (Part B)
IFWadj	Ingestion factor, water ([L•yr]/[kg•d])	1.1	By analogy to RAGS (Part B)
VFW	Volatilization factor for water (unitless)	0.5	RAGS(Part B) , EPA 1991 (OSWER No. 9285.7-01B)
PEF	Particulate emission factor (m ³ /kg)	See below	RAGS(Part B) , EPA 1991 (OSWER No. 9285.7-01B)
VFs	Volatilization factor for soil (m ³ /kg)	See below	Technical Background Document for Draft SSL (EPA 1994)
sat	Soil saturation concentration (mg/kg)	See below	Technical Background Document for Draft SSL (EPA 1994)

Footnote:

^aSeventy years is the averaging time for carcinogens. For noncarcinogens, the averaging time is set equal to the exposure duration (AT = ED).

^bExposure duration for lifetime residents is assumed to be 30 years total. For carcinogens, exposures are combined for children (6 years) and adults (24 years).

PRG EQUATIONS

Soil Equations: For soils, equations were based on three exposure routes (ingestion, skin contact, and inhalation).

Equation 4-1: Combined Exposures to Carcinogenic Contaminants in Residential Soil

$$C(\text{mg/kg}) = \frac{\text{TR} \times \text{AT} \times 365d/y}{\text{EF}_r [(\frac{\text{IFS}_{adj} \times \text{CSF}_o}{10^6 \text{mg/kg}}) + (\frac{\text{SFS}_{adj} \times \text{ABS} \times \text{CSF}_o}{10^6 \text{mg/kg}}) + (\frac{\text{InhF}_{adj} \times \text{CSF}_I}{\text{VF}_s^a})]}$$

Equation 4-2: Combined Exposures to Noncarcinogenic Contaminants in Residential Soil

$$C(\text{mg/kg}) = \frac{\text{THQ} \times \text{BW}_c \times \text{ED}_r \times 365d/y}{\text{EF}_r \times \text{ED}_c [(\frac{1}{\text{RfD}_o} \times \frac{\text{IRS}_c}{10^6 \text{mg/kg}}) + (\frac{1}{\text{RfD}_o} \times \frac{\text{SA}_c \times \text{AF} \times \text{ABS}}{10^6 \text{mg/kg}}) + (\frac{1}{\text{RfD}_I} \times \frac{\text{IRA}_c}{\text{VF}_s^a})]}$$

Equation 4-3: Combined Exposures to Carcinogenic Contaminants in Industrial Soil

$$C(\text{mg/kg}) = \frac{\text{TR} \times \text{BW}_a \times \text{AT} \times 365d/y}{\text{EF}_o \times \text{ED}_o [(\frac{\text{IRS}_o \times \text{CSF}_o}{10^6 \text{mg/kg}}) + (\frac{\text{SA}_a \times \text{AF} \times \text{ABS}}{10^6 \text{mg/kg}}) + (\frac{\text{IRA}_a \times \text{CSF}_I}{\text{VF}_s^a})]}$$

Equation 4-4: Combined Exposures to Noncarcinogenic Contaminants in Industrial Soil

$$C(\text{mg/kg}) = \frac{\text{THQ} \times \text{BW}_a \times \text{ED}_o \times 365d/y}{\text{EF}_o \times \text{ED}_o [(\frac{1}{\text{RfD}_o} \times \frac{\text{IRS}_o}{10^6 \text{mg/kg}}) + (\frac{1}{\text{RfD}_o} \times \frac{\text{SA}_a \times \text{AF} \times \text{ABS}}{10^6 \text{mg/kg}}) + (\frac{1}{\text{RfD}_I} \times \frac{\text{IRA}_a}{\text{VF}_s^a})]}$$

Footnote:

*Use VF_s for volatile chemicals (defined as having a Henry's Law Constant [atm-m³/mol] greater than 10⁵ and a molecular weight less than 200 grams/mol) or PEF for non-volatile chemicals.

Tap Water Equations:

Equation 4-5: Ingestion and Inhalation Exposures to Carcinogenic Contaminants in Water

$$C(\mu\text{g/L}) = \frac{TR \times AT \times 365d/y \times 1000\mu\text{g/mg}}{EF_r [(IFW_{adj} \times CSF_o) + (VF_w \times InhF_{adj} \times CSF_i)]}$$

Equation 4-6: Ingestion and Inhalation Exposures to Noncarcinogenic Contaminants in Water

$$C(\mu\text{g/L}) = \frac{THQ \times BW_a \times ED_I \times 365d/y \times 1000\mu\text{g/mg}}{EF_r \times ED_I [(\frac{IRW_a}{RfD_o}) + (\frac{VF_w \times IRA_a}{RfD_I})]}$$

Air Equations:

Equation 4-7: Inhalation Exposures to Carcinogenic Contaminants in Air

$$C(\mu\text{g/m}^3) = \frac{TR \times AT \times 365d/y \times 1000\mu\text{g/mg}}{EF_r \times InhF_{adj} \times CSF_i}$$

Equation 4-8: Inhalation Exposures to Noncarcinogenic Contaminants in Air

$$C(\mu\text{g/m}^3) = \frac{THQ \times RfD_I \times BW_a \times ED_I \times 365d/y \times 1000\mu\text{g/mg}}{EF_r \times ED_I \times IRA_a}$$

SOIL-TO-AIR VOLATILIZATION FACTOR (VF_s)

Equation 4-9: Derivation of the Volatilization Factor

$$VF_s (m^3/kg) = (Q/C) \times \frac{(3.14 \times \alpha \times T)^{1/2}}{(2 \times D_{ei} \times \Theta_a \times K_{as})} \times 10^{-4} m^2/cm^2$$

where:

$$\alpha = \frac{D_{ei} \times \Theta_a}{\Theta_a + [(\rho_s) (1-\Theta_a) / K_{as}]}$$

<u>Parameter</u>	<u>Definition (units)</u>	<u>Default</u>
VF _s	Volatilization factor (m ³ /kg)	--
Q/C	Inverse of the mean conc. at the center of a 0.5-acre square source (g/m ² -s per kg/m ³)	68.81
T	Exposure interval (s)	7.9 × 10 ⁸
Dei	Effective diffusivity (cm ² /s)	Di(Θ _a ^{3.33} /n ²)
Θ _a	Air filled soil porosity (L _{air} /L _{soil})	0.28 or n-wρ _b
Di	Diffusivity in air (cm ² /s)	Chemical-specific
n	Total soil porosity (L _{pore} /L _{soil})	0.43 (loam)
w	Average soil moisture content (g _{water} /g _{soil} or cm ³ _{water} /g _{soil})	0.1
ρ _b	Dry soil bulk density (g/cm ³)	1.5 or (1 - n)ρ _s
ρ _s	Soil particle density (g/cm ³)	2.65
K _{as}	Soil-air partition coefficient (g-soil/cm ³ -air)	(H/Kd) × 41 (41 is a conversion factor)
H	Henry's Law constant (atm-m ³ /mol)	Chemical-specific
K _d	Soil-water partition coefficient (cm ³ /g)	K _{oc} × f _{oc}
k _{oc}	Soil organic carbon/water partition coefficient (cm ³ /g)	Chemical-specific
f _{oc}	Fraction organic carbon content of soil (g/g)	0.02 or site-specific

SOIL SATURATION CONCENTRATION (sat)

Equation 4-10: Derivation of the Soil Saturation Limit

$$sat = \frac{S}{\rho_b} (K_d \rho_b + \Theta_w + H' \Theta_a)$$

<u>Parameter</u>	<u>Definition (units)</u>	<u>Default</u>
sat	Soil saturation concentration (mg/kg)	--
S	Solubility in water (mg/L-water)	Chemical-specific
ρ_b	Dry soil bulk density (kg/L)	1.5 or $(1 - n)\rho_s$
n	Total soil porosity (L_{pore}/L_{soil})	0.43 (loam)
ρ_s	Soil particle density (kg/L)	2.65
K_d	Soil-water partition coefficient (L/kg)	$K_{oc} \times f_{oc}$ (organics)
k_{oc}	Soil organic carbon/water partition coefficient (L/kg)	Chemical-specific
f_{oc}	Fraction organic carbon content of soil (g/g)	0.02 or site-specific
Θ_w	Water-filled soil porosity (L_{water}/L_{soil})	0.15 or $w\rho_b$
Θ_a	Air filled soil porosity (L_{air}/L_{soil})	0.28 or $n-w\rho_b$
w	Average soil moisture content (kg_{water}/kg_{soil} or L_{water}/kg_{soil})	0.1
H'	Henry's Law constant (unitless)	$H \times 41$, where 41 is a units conversion factor
H	Henry's Law constant (atm-m ³ /mol)	Chemical-specific

SOIL-TO-AIR PARTICULATE EMISSION FACTOR (PEF)

Equation 4-11: Derivation of the Particulate Emission Factor

$$PEF(m^3/kg) = Q/C \times \frac{3600s/h}{0.036 \times (1-V) \times (U_m/U_t)^3 \times F(x)}$$

<u>Parameter</u>	<u>Definition (units)</u>	<u>Default</u>
PEF	Particulate emission factor (m ³ /kg)	1. 316 x 10 ⁹
Q/C	Inverse of the mean concentration at the center of a 0.5-acre-square source (g/m ² -s per kg/m ³)	90.80
V	Fraction of vegetative cover (unitless)	0.5
U _m	Mean annual windspeed (m/s)	4.69
U _t	Equivalent threshold value of windspeed at 7 m (m/s)	11.32
F(x)	Function dependent on U _m /U _t derived using Cowherd (1985) (unitless)	0.194

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ATTACHMENT A
PHYSICAL-CHEMICAL CONSTANTS USED IN CALCULATING SOIL PRGs FOR VOLATILE ORGANIC CHEMICALS

	MW (g/mol)	Henry's Law (atm-m ³ /mol)	Diffusivity in Air (cm ² /s)	Koc (ml/g)	Water Solubility (mg/l)	References
Acetone	58	0.000021	0.100	2.2	1000000	1,2
Acrylonitrile	53	0.000088	0.110	0.9	75000	1,2
Ammonia	17	0.000320	0.260	3.1	530000	1,2
Benzene	78	0.005500	0.088	65.0	1800	1,2,3
Benzyl chloride	130	0.000051	0.067	50.0	3300	1,2
Bis(2-chloroethyl)ether	140	0.000290	0.070	14.0	10000	1,2,4
Bis(2-chloroisopropyl)ether	170	0.000110	0.063	61.0	1700	1,2
Bis(chloromethyl)ether	120	0.000200	0.089	1.2	22000	1,2
Bromodichloromethane	160	0.001600	0.080	100.0	4700	2,4
Bromoethene (Surrogate = Bromomethane)	108	0.006200	0.100	130.0	18000	2,4
Bromomethane	95	0.006200	0.100	130.0	18000	2,4
1,3-Butadiene	54	0.180000	0.098	120.0	740	1,2
Carbon disulfide	76	0.012000	0.110	54.0	2900	1,2
Carbon tetrachloride	150	0.024000	0.080	110.0	760	2,3
Chlorine dioxide						
Chloroacetaldehyde						
2-Chloroacetophenone (Surrogate = Chlorobenzene)	150	0.003500	0.072	160.0	470	2,3
Chlorobenzene	110	0.003500	0.072	160.0	470	2,3
2-Chloro-1,3-butadiene	88	0.032000	0.110	50.0	660	2,4
1-Chlorobutane (Surrogate = 2-Chloro-1,3-butadiene)	93	0.032000	0.110	50.0	660	2,4
Chlorodifluoromethane (Surrogate = Dichlorodifluoromethane)	120	0.100000	0.080	58.0	280	1,2,4
1-Chloroethyl vinyl ether						
Chloroform	120	0.003800	0.089	31.0	8200	1,2,4
Chloromethane	51	0.024000	0.110	35.0	8200	1,2,4
2-Chloropropane	79	0.002300	0.080	51.0	2700	1,2
o-Chortoluene	127	0.003500	0.072	160.0	470	2,3
Crotonaldehyde (Surrogate = Methyl methacrylate)	70	0.240000	0.091	840.0	20	1,2
Cumene (Surrogate = Ethylbenzene)	120	0.006400	0.075	220.0	150	2,3
1,2-Dibromoethane	190	0.000320	0.073	28.0	3400	2,3
1,2-Dichlorobenzene	150	0.001900	0.130	1100.0	100	2,3
1,3-Dichlorobenzene	150	0.001900	0.130	1200.0	120	2,3
1,4-Dichlorobenzene	150	0.001600	0.130	1200.0	79	2,3
1,4-Dichloro-2-butene (Surrogate = 2-Chloro-1,3-butadiene)	122	0.032000	0.110	50.0	660	1,2
Dichlorodifluoromethane	120	0.100000	0.080	58.0	280	1,2,4
1,1-Dichloroethane	99	0.004300	0.091	30.0	5500	2,3
1,2-Dichloroethane (EDC)	99	0.001200	0.091	14.0	8700	2,3
1,1-Dichloroethylene	97	0.150000	0.079	65.0	400	2,3
1,2-Dichloroethylene (trans)	97	0.006600	0.079	59.0	6300	2,3
1,2-Dichloroethylene (mixture)	97	0.006600	0.079	59.0	6300	2,3
1,2-Dichloropropane	110	0.003600	0.080	51.0	2700	1,2,4
1,3-Dichloropropane	110	0.001300	0.080	48.0	2800	1,2
1,3-Dichloropropene	110	0.001300	0.081	48.0	2800	1,2
Dicyclopentadiene						
Dimethylamine	45	0.000090	0.120	2.2	1000000	1,2
1,4-Dioxane	88	0.000011	0.085	3.5	430000	1,2
Epichlorohydrin	93	0.000032	0.088	3.5	60000	1,2
Ethyl acrylate (Surrogate = Methyl methacrylate)	100	0.240000	0.091	840.0	20	1,2
Ethylbenzene	110	0.007900	0.075	220.0	680	2,3
Ethylene oxide	44	0.000076	0.130	2.2	1000000	1,2
Ethyl chloride	65	0.011000	0.100	15.0	5700	2,3
Ethyl ether	74	0.000013	0.070	14.0	10000	1,2,4
Ethyl methacrylate (Surrogate = Methyl methacrylate)	120	0.240000	0.091	840.0	20	1,2
Hydrogen sulfide						
Methacrylonitrile (Surrogate = Acrylonitrile)	93	0.000088	0.110	0.9	79000	1,2
Methyl acetate (Surrogate = Acetone)	74	0.000021	0.100	2.2	1000000	1,2
Methyl acrylate (Surrogate = Methyl methacrylate)	100	0.240000	0.091	840.0	20	1,2
Methylene chloride	85	0.002600	0.100	8.8	13200	2,3
Methyl ethyl ketone	72	0.000027	0.090	4.5	270000	2,3
Methyl styrene (mixture) (Surrogate = Styrene)	119	0.002300	0.071	360.0	300	2,3
Methyl styrene (alpha) (Surrogate = Styrene)	119	0.002300	0.071	360.0	300	2,3
Nitrogen dioxide						
2-Nitropropane						
Polynuclear aromatic hydrocarbons						
Acenaphthene	150	0.001200	0.064	4600.0	4	2,3
Anthracene	180	0.000034	0.058	13000.0	0	2,3
Fluorene	170	0.000064	0.061	7900.0	2	2,3
Naphthalene	130	0.001300	0.069	1300.0	31	2,3
Phenanthrene	180	0.000040	0.058	14000.0	1	2,3
Propylene oxide	58					
Styrene	100	0.002300	0.071	360.0	300	2,3
1,1,2-Tetrachloroethane	170	0.000380	0.073	54.0	2900	1,2
1,1,2,2-Tetrachloroethane	170	0.000500	0.073	220.0	2900	2,3
Tetrachloroethylene (PCE)	170	0.023000	0.072	660.0	150	2,3
Tetrahydrofuran	72	0.000110	0.089			2,3
Toluene	92	0.006600	0.078	260.0	520	2,3
1,2,4-Trichlorobenzene	180	0.002300	0.062	9200.0	30	1,2
1,1,1-Trichloroethane	130	0.002800	0.080	150.0	950	2,3
1,1,2-Trichloroethane	130	0.001200	0.080	56.0	4500	2,3
Trichloroethylene (TCE)	130	0.008920	0.081	130.0	1000	2,3
Trichlorofluoromethane	137	0.097000	0.087	160.0	1100	1,2,4
1,1,2-Trichloropropane (Surrogate = 1,2-Dichloropropane)	147	0.003600	0.080	51.0	2700	1,2
1,2,3-Trichloropropane (Surrogate = 1,2-Dichloropropane)	147	0.003600	0.080	51.0	2700	1,2
1,2,3-Trichloropropene (Surrogate = 1,3-Dichloropropene)	146	0.001300	0.081	48.0	2800	1,2
1,1,2-Trichloro-1,2,2-trifluoroethane (S = Trichlorofluoromethane)	186	0.058000	0.087	160.0	1100	1,2,4
Triethylamine (Surrogate = Dimethylamine)	86	0.000090	0.120	2.2	1000000	1,2
Vinyl chloride	63	0.700000	0.110	57.0	1100	2,3
m-Xylene	110	0.006900	0.087	240.0	200	2,3
o-Xylene	110	0.004900	0.087	240.0	200	2,3
p-Xylene	110	0.007000	0.087	240.0	200	2,3
Xylene (mixed)	110	0.005300	0.087	240.0	200	2,3

FOR PLANNING PURPOSES

Key : F=IRIS T=FHAEST E=EROD X=WITHDRAWN FROUTE EXTRAPOLATION G=CANCER PRG nc=NONCANCER PRG sat=SOIL SATURATION max=CEILING LIMIT *nc < 1000 ca) **nc > 1000 ca)

PRELIMINARY REMEDIAL GOALS (PRGs)									
CONTAMINANT									
TOXICITY VALUES		SOIL FACTORS		VOC		CAS No.		Residential Industrial Soil (mg/kg) Ambient Air Soil (mg/m ³)	
GRID	GRID	GRID	GRID	V	F	CAS No.		Soil (mg/kg)	Ambient Air (ug/m ³)
OSF 1/(mg/kg-d) 1/(mg/kg-d)	OSF 1/(mg/kg-d) 1/(mg/kg-d)	TSF 1/(mg/kg-d) 1/(mg/kg-d)	TSF 1/(mg/kg-d) 1/(mg/kg-d)	Soil C ABS (m ³ /kg)	Soil C ABS (m ³ /kg)				Tap Water (ug/l)
8.7E-03 i	4.0E-03 i	8.7E-03 r	4.0E-03 r	0	0.10	30560-19-1	Acerbate	5.1E+01 ca*	2.2E+02 ca*
				2.6E-03 i	0	0.10	75-07-0	Acetaldehyde	1.3E+03 nc
				2.0E-02 r	0	0.10	34256-32-1	Acetochlor	2.0E+03 nc
				1.0E-01 i	1	0.10	1.9E-04 67-64-1	Acetone	4.6E+03 nc
				2.9E-03 x	0	0.10	75-88-5	Acetone cyanohydrin	3.9E+02 nc
				1.4E-02 h	0	0.10	75-05-8	Acetonitrile	5.6E+03 nc
				5.7E-06 x	0	0.10	98-86-2	Acetophenone	8.5E+02 nc
				1.3E-02 i	1	0.10	50594-88-6	Acifluftan	1.3E+03 nc
				5.7E-06 i	0	0.10	107-02-8	Acrolein	9.8E-02 ca*
				2.0E-02 h	0	0.10	79-08-1	Acrylamide	4.2E-01 ca
				2.0E-04 i	0	0.10	1.3E-01	Acrylic acid	3.2E+04 nc
				4.6E+00 i	1	0.10	5.4E-04 i	Acrylonitrile	1.3E-01 ca*
				5.0E-01 i	1	0.10	5.4E-03 107-13-1	Acrylonitrile	5.5E+00 ca*
				1.0E-03 h	2.4E-01 i	1	5.4E-04 15972-60-8	Alachlor	9.8E+03 nc
				8.1E-02 h	1.0E-02 i	0	1.0E-02 r	Alar	1.0E+05 nc
				1.5E-01 i	0	0.10	1.58E-04-5	Aldicarb	6.5E+01 nc
				1.0E-03 i	0	0.10	118-06-3	Aldicarb sulfone	6.5E+01 nc
				1.0E-03 i	0	0.10	164E-04	Aldrin	2.6E-02 ca*
				1.7E+01 i	3.0E-05 i	0	309-00-2	Aldrin	1.6E+04 nc
				2.5E-01 i	0	0.10	5585-84-8	Ally	3.3E+02 nc
				5.0E-03 x	0	0.10	107-18-6	Ally alcohol	3.3E+03 nc
				5.0E-02 h	0	0.10	107-05-1	Allyl chloride	7.7E+04 nc
				1.0E+00 e	0	0.01	7429-90-5	Aluminum	3.1E+01 nc
				4.0E-04 i	0	0.01	20859-73-8	Aluminum phosphide	2.0E+01 nc
				3.0E-04 i	0	0.10	67485-29-4	Amdro	5.9E+02 nc
				9.0E-03 i	0	0.10	834-12-8	Ametryn	4.6E+03 nc
				7.0E-02 r	0	0.10	591-27-5	m-Aminophenol	1.3E+00 nc
				2.0E-05 h	0	0.10	504-24-5	4-Aminopyridine	1.4E+01 nc
				2.5E-03 i	0	0.10	33089-51-1	Amitraz	1.6E+02 nc
				2.9E-02 i	0	0.10	3.6E-03 7684-41-7	Ammonia	3.8E+01 nc
				0	0.01		1314-60-9	Ammonium sulfamate	1.3E+04 nc
				0	0.01		7773-06-0	Ammonium sulfate	1.9E+01 nc
				62-53-3			28300-74-5	Aniline	2.0E+02 nc
				0	0.01		1332-81-6	Antimony tetroxide	3.1E+01 nc
				0	0.01		1309-64-4	Antimony trioxide	3.1E+01 nc
				0	0.01		74115-24-5	Apollo	8.5E+02 nc
				1.3E-02 i	1	0.10	140-57-8	Aramite	1.8E+01 ca
				2.5E-02 h	2.5E-02 i	0	140-38-2	Arsenic (noncancer endpoint)	2.2E+01 nc
				3.0E-04 i	0	0.03	7440-38-2	Arsenic (cancer endpoint)	3.2E-01 ca*
				1.8E+00 i	3.0E-04 i	1	0.03		2.0E+00 ca
									4.5E-04 ca
									3.8E-02 ca)

CO = CANCER PROB. NO CANCER PROB. SOIL SATURATION MAX CULTIVATING LIMIT

FOR PLANNING PURPOSES

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CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)					
	V	VF	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Tap Water (ug/m³)
TOXICITY VALUES	Soil Factors	Soil Factors	Soil Factors	Soil Factors	Soil Factors	Soil Factors
oSF M(mg/kg- D)	oRID ISF M(mg/kg- D)	IRID C ABS (mg/kg- D)	VF C ABS (m³/kg)			
9.0E-03 1.4E-05 0 NA 7784-42-1 Arsine 5.2E-02 nc						
9.0E-03 9.0E-03 0 0.10 76578-12-6 Assure 3.3E+01 nc						
5.0E-02 5.0E-02 0 0.10 3337-71-1 Asulam 1.8E+02 nc						
2.2E-01 h 2.2E-01 r 1912-24-9 Atrazine 3.0E-01 ca						
1.1E-01 4.0E-04 1.1E-01 l 77751-41-2 Avermectin B1 1.5E+01 nc						
7.0E-02 l 1.4E-04 h 103-33-3 Azobenzene 2.6E+01 nc						
7.0E-02 l 1.4E-04 h 7440-39-3 Barium and compounds 4.0E+00 ca						
4.0E-03 l 4.0E-03 l 114-26-1 Baygon 5.3E+03 nc						
3.0E-02 l 3.0E-02 r 43121-43-3 Bayleton 2.6E+02 nc						
2.5E-02 l 2.5E-02 r 68359-37-5 Baythroid 2.0E+03 nc						
3.0E-01 l 3.0E-01 r 1861-40-1 Benefin 3.3E+03 nc						
5.0E-02 l 5.0E-02 r 17804-35-2 Benomyl 1.6E+02 nc						
2.5E-03 l 2.5E-03 r 25057-48-0 Bentazon 6.5E+03 nc						
1.0E-01 l 1.0E-01 r 100-52-7 Benzaldehyde 1.4E+00 ca						
2.9E-02 l 2.8E-02 l 100-51-6 Benzene 1.9E-03 ca						
2.3E+02 l 3.0E-03 l 92-87-6 Benzidine 1.0E+05 max						
4.0E+00 l 4.0E+00 l 65-35-0 Benzoic acid 3.4E-02 ca						
1.3E+01 l 1.3E+01 r 98-07-7 Benzotrichloride 2.0E+04 nc						
3.0E-01 h 3.0E-01 r 100-51-6 Benzyl alcohol 1.4E+00 ca						
1.7E-01 l 1.7E-01 r 100-44-7 Benzyl chloride 1.4E-01 ca						
4.3E+00 l 5.0E-03 8.4E+00 l 7440-41-7 Beryllium and compounds 1.1E+00 ca						
1.0E-04 l 1.0E-04 r 141-56-2 Bidrin 6.5E+00 nc						
1.5E-02 l 1.5E-02 r 82657-04-3 Biphenol (Talstar) 9.8E+02 nc						
5.0E-02 l 5.0E-02 r 92-52-4 1,1-Biphenyl 3.3E+03 nc						
1.1E+00 l 1.2E+00 l 111-14-4 Bis(2-chloroethyl)ether 7.4E-02 ca						
7.0E-02 h 3.5E-02 h 36638-32-9 Bis(2-chloroisopropyl)ether 3.9E+00 ca						
2.2E+02 l 2.2E+02 l 542-38-1 Bis(chloromethyl)ether 1.4E-04 ca						
7.0E-02 x 7.0E-02 x 108-60-1 Bis(2-chloro-1-methylethyl)ether 6.3E+00 ca						
1.4E-02 l 2.0E-02 l 117-81-7 Bis(2-ethylhexyl)phthalate (DEHP) 3.2E+01 ca*						
5.0E-02 l 5.0E-02 r 80-05-7 Bisphenol A 3.3E+03 nc						
9.0E-02 l 5.7E-03 h 7440-42-8 Boron 5.9E+03 nc						
6.2E-02 l 2.0E-02 l 7637-07-2 Boron trifluoride 6.1E+04 nc						
5.0E-03 h 5.0E-03 r 101-55-3 Bromodichloromethane 1.4E+00 ca						
2.0E-02 l 2.0E-02 r 16E+04 4-Bromophenyl phenyl ether 4.5E-01 ca*						
1.1E-01 r 8.6E-04 r 8.3E+03 Bromoethene (vinyl bromide) 5.6E+01 ca**						
7.9E-03 l 2.0E-02 i 2104-96-3 Bromoform (tribromomethane) 1.5E+01 nc						
1.4E-03 l 1.4E-03 i 1689-34-5 Bromophos 3.3E+02 nc						
5.0E-03 h 5.0E-03 r 1.3E+03 Bromoxynil 1.3E+03 nc						

NONCANCER PRG. DO NOT EXTRAPOLATE TO CANCER PRG. $\text{INC} < 1000 \text{ ea}$ $\text{INC} < \text{TOX ta}$

FOR PLANNING PURPOSES

Key: ERTS = EXTRAPOLATION RANGE; TERCAD = EXTRAPOLATION RANGE; CERCA = CANCER EXTRAPOLATION RATE; PRG = NON-CARCINOGENIC EXTRAPOLATION RATE; sat = SOIL SATURATION; max = MAXIMUM CONCENTRATION; nc = NO CONCERN									
FOR PLANNING PURPOSES									
TOXICITY VALUES					SOIL FACTORS				
oSF 1/(mg/kg-d)	oRID 1/(mg/kg-d)	TSF 1/(mg/kg-d)	IRID 1/(mg/kg-d)	CAS No.	V Soil C ABS (m³/m²)	VF Soil (m³/m²)	CAS No.	VF Soil (m³/m²)	CONTAMINANT
9.8E-01 r	2.0E-02 l	9.8E-01 i	2.0E-02 r	1689-99-2	Bromoxylin octanoate				
1.0E-01 l	1.0E-01 r	1.0E-01 r	1.0E-01 r	106-99-0	1,3-Butadiene				
5.0E-02 l	5.0E-02 l	5.0E-02 l	5.0E-02 l	71-36-3	1-Butanol				
2.0E-01 l	2.0E-01 r	2.0E-01 r	2.0E-01 r	2009-41-5	Butylate				
1.0E+00 l	1.0E+00 r	1.0E+00 r	1.0E+00 r	85-68-7	Butyl benzyl phthalate				
3.0E-03 h	3.0E-03 r	3.0E-03 r	3.0E-03 r	85-70-1	Butylphthalyl butylglycolate				
5.0E-04 l	6.3E+00 i	6.3E+00 i	6.3E+00 i	75-60-5	Cacodylic acid				
8.6E-03 h	2.0E-03 l	8.6E-03 r	5.0E-01 r	7440-43-9	Cadmium and compounds				
3.5E-03 h	1.3E-01 i	3.5E-03 r	5.0E-01 r	105-60-2	"CAL-Modified PRG" (PEA, 1994)				
1.3E-01 l	1.0E-01 i	1.3E-01 r	2.0E-03 r	2425-06-1	Caprolactam				
2.0E-02 h	2.0E-02 r	2.0E-02 r	2.0E-02 r	133-06-2	Captafol				
5.0E-03 l	5.0E-03 l	5.0E-03 l	5.0E-03 l	13-01 r	Captan				
1.0E-01 l	1.0E-01 r	1.0E-01 r	1.0E-01 r	63-25-2	Carbaryl				
4.0E-01 h	4.0E-01 r	4.0E-01 r	4.0E-01 r	86-74-8	Carbazole				
1.3E-01 l	1.3E-01 r	1.3E-01 r	1.3E-01 r	1563-98-2	Carbofuran				
2.0E-03 h	2.0E-03 r	2.0E-03 r	2.0E-03 r	75-15-0	Carbon disulfide				
5.3E-02 l	5.7E-04 e	5.3E-02 l	5.7E-04 e	58-23-5	Carbon tetrachloride				
1.0E-02 l	1.0E-02 r	1.0E-02 r	1.0E-02 r	55285-14-8	Carbosulfan				
1.0E-01 l	1.0E-01 r	1.0E-01 r	1.0E-01 r	5234-38-4	Carboxin				
2.0E-03 l	2.0E-03 r	2.0E-03 r	2.0E-03 r	302-17-0	Chloral				
1.5E-02 l	1.5E-02 r	1.5E-02 r	1.5E-02 r	133-90-4	Chloramben				
4.0E-01 h	4.0E-01 r	4.0E-01 r	4.0E-01 r	118-75-2	Chloranil				
1.3E+00 l	6.0E-05 i	1.3E+00 l	6.0E-05 r	57-74-9	Chlordane				
2.0E-02 l	2.0E-02 r	2.0E-02 r	2.0E-02 r	9098-32-4	Chlorimuron-ethyl				
1.0E-01 l	1.0E-01 r	1.0E-01 r	1.0E-01 r	7782-50-5	Chlorine				
5.7E-05 l	5.7E-05 l	5.7E-05 l	5.7E-05 l	10049-04-4	Chlorine dioxide				
2.0E-03 h	2.0E-03 r	2.0E-03 r	2.0E-03 r	107-20-0	Chloroacetaldehyde				
8.6E-06 r	8.6E-06 r	8.6E-06 r	8.6E-06 r	79-11-8	Chloroacetic acid				
4.0E-03 l	4.0E-03 r	4.0E-03 r	4.0E-03 r	532-27-4	2-Chloroacetylphenone				
2.0E-02 l	5.7E-03 h	5.7E-03 h	5.7E-03 h	106-47-8	4-Chloroaniline				
2.7E-01 h	2.0E-02 l	2.7E-01 h	2.0E-02 r	108-90-7	Chlorobenzene				
4.0E-01 h	4.0E-01 h	4.0E-01 h	4.0E-01 h	510-15-6	Chlorobenzilate				
1.4E-01 l	1.4E-01 l	1.4E-01 l	1.4E-01 l	74-11-3	p-Chlorobenzoic acid				
2.0E-02 h	2.0E-02 r	2.0E-02 r	2.0E-02 r	98-56-6	4-Chlorobenzotrifluoride				
2.0E-02 h	2.0E-02 h	2.0E-02 h	2.0E-02 h	126-99-8	2-Chloro-1,3-butadiene				
4.0E-01 h	4.0E-01 r	4.0E-01 r	4.0E-01 r	109-69-3	1-Chlorobutane				
1.0E-00 l	1.0E-00 l	1.0E-00 l	1.0E-00 l	110-75-8	2-Chloroethyl vinyl ether				
5.3E-01 ca	5.3E-01 ca	5.3E-01 ca	5.3E-01 ca	1.3E+03	Chlorodifluoromethane				
1.4E-01 r	1.4E-01 r	1.4E-01 r	1.4E-01 r	6.4E+03	Chloroform				

Key: FIRST THREE STAFFED AND WITHDRAWN FOR ROUTE EXTRAPOLATION TO CANCER PRG FROM CANCER PRG SATURATION MAKING LIMIT ($mg \cdot m^{-3} \cdot hr^{-1} \cdot 10^3$)

FOR PLANNING PURPOSES

TOXICITY VALUES										SOIL FACTORS			CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)		
OSF 1/(mg/kg-d) 1/(mg/kg-d)	ORID 1/(mg/kg-d) 1/(mg/kg-d)	ISF 1/(mg/kg-d) 1/(mg/kg-d)	IRID 1/(mg/kg-d) 1/(mg/kg-d)	V O skin C ABS	V skin C ABS	V VF (m ³ /kg)	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)							
1.3E-02 h	6.3E-03 h	1	0.10	2.0E+03	74-87-3			2.0E+00	ca	4.3E+00	ca	1.1E+00	ca	1.5E+00	ca			
5.8E-01 h	5.8E-01 r	0	0.10	95-69-2	4-Chloro-2-methylaniline			7.7E-01	ca	3.3E+00	ca	1.2E-02	ca	1.2E-01	ca			
4.6E-01 h	4.6E-01 r	0	0.10	3165-9-3	4-Chloro-2-methylaniline hydrochloride			9.7E-01	ca	4.1E+00	ca	1.5E-02	ca	1.5E-01	ca			
8.0E-02 i	8.0E-02 i	8.0E-02 r	0	0.10	91-58-7	beta-Chloronaphthalene		5.2E+03	nc	5.5E+04	nc	2.9E+02	nc	2.9E+03	nc			
2.5E-02 h	2.5E-02 r	r	0	0.10	88-73-3	o-Chloronitrobenzene		1.8E+01	ca	7.6E+01	ca	2.7E-01	ca	2.7E+00	ca			
1.8E-02 h	1.8E-02 r	r	0	0.10	100-90-5	p-Chloronitrobenzene		2.5E+01	ca	1.1E+02	ca	3.7E-01	ca	3.7E+00	ca			
5.0E-03 i	5.0E-03 i	5.0E-03 r	0	0.10	95-57-8	2-Chlorophenol		3.3E+02	nc	3.4E+03	nc	1.8E+01	nc	1.8E+02	nc			
2.9E-02 r	2.9E-02 r	2.9E-02 h	1	0.10	97E+03	2-Chloropropane		3.5E+02	nc	1.3E+03	nc	1.0E+02	nc	1.7E+02	nc			
1.1E-02 h	1.5E-02 i	1.1E-02 r	0	0.10	1897-45-6	Chlorothaloni		4.0E+01	ca**	1.7E+02	ca*	6.1E-01	ca*	6.1E+00	ca*			
	2.0E-02 i	2.0E-02 r	1	0.10	1.5E+04	o-Chlorotoluene		3.4E+02	nc	1.6E+03	sat	7.3E+01	rc	1.2E+02	rc			
2.0E-01 i	2.0E-01 r	0	0.10	101-21-3	Chloropropham			1.3E+04	nc	1.0E+05	max	7.3E+02	rc	7.3E+03	rc			
3.0E-03 i	3.0E-03 i	3.0E-03 r	0	0.10	2921-88-2	Chlorpyrifos		2.0E+02	nc	2.0E+03	nc	1.1E+01	nc	1.1E+02	nc			
1.0E-02 h	1.0E-02 h	1.0E-02 r	0	0.10	5598-13-0	Chlorpyrifos-methyl		6.5E+02	nc	6.8E+03	nc	3.7E+01	nc	3.7E+02	nc			
5.0E-02 i	5.0E-02 r	5.0E-02 r	0	0.10	64902-72-3	Chlorsulfuron		3.3E+03	nc	3.4E+04	nc	1.8E+02	nc	1.8E+03	nc			
8.0E-04 h	8.0E-04 r	0	0.10	21923-23-9	Chlorthiophos			5.2E+01	rc	5.5E+02	nc	2.9E+00	nc	2.9E+01	nc			
4.2E-01 i	4.2E-01 i	n/a	0	0.01	Total Chromium (1/6 ratio Cr VI/Cr III)			2.1E+02	ca	1.6E+03	ca	1.6E-04	ca	1.8E+02	ca			
5.0E-03 i	5.0E-03 i	2.9E-02 i	0	0.01	7440-47-3	Chromium VI		3.0E+01	ca	2.3E+02	ca	2.3E-05	ca	1.8E-01	ca			
					"CAL-Modified PRG" (PEA, 1994)			2.0E-01				1.0E+00						
					Cobalt							3.1E-03	ca	1.4E+03	ca			
					7440-48-4									1.8E+02	nc			
					8007-45-2	Coke Oven Emissions		2.8E+03	nc	6.3E+04	nc	3.5E-03	ca	3.5E-03	ca			
					7440-50-8	Copper and compounds		1.2E-02	ca	2.6E-02	ca	9.4E+00	nc	1.9E+01	nc			
					123-73-9	Crotonaldehyde		4.9E+01	rc	1.6E+02	nc	9.4E+00	rc	9.4E+00	rc			
					Cumene			1.3E+02	ca*	2.3E+00	ca	8.0E-03	ca	8.0E-02	ca			
					21725-46-2	Cyanazine												
					n/a	Cyanides												
					542-62-1	Barium cyanide		7.7E+03	nc	1.0E+05	max			3.7E+03	nc			
					544-92-3	Copper cyanide		3.8E+02	nc	8.5E+03	nc			1.8E+02	nc			
					592-01-8	Calcium cyanide		3.1E+03	nc	6.8E+04	nc			1.5E+03	nc			
					460-19-5	Cyanogen		2.6E+03	nc	2.7E+04	nc			1.5E+03	nc			
					506-88-3	Cyanogen bromide		5.9E+03	nc	1.0E+05	max			3.3E+03	nc			
					506-77-4	Cyanogen chloride		3.3E+03	nc	3.4E+04	nc			1.8E+03	nc			
					57-12-5	Free cyanide		1.3E+03	nc	1.4E+04	nc			7.3E+02	nc			
					74-90-8	Hydrogen cyanide								3.1E+00	nc			
					151-50-8	Potassium cyanide		3.3E+03	nc	3.4E+04	nc			1.8E+03	nc			
					506-61-6	Potassium silver cyanide		1.3E+04	nc	1.0E+05	max			7.3E+03	nc			
					506-64-9	Silver cyanide		6.5E+03	nc	1.0E+05	max			3.7E+03	nc			
					143-33-9	Sodium cyanide		2.6E+03	nc	2.7E+04	nc			1.5E+03	nc			
					557-72-1	Zinc cyanide		3.3E+03	nc	3.4E+04	nc			1.8E+03	nc			
					108-94-1	Cyclohexanone		1.0E+05	max	1.0E+05	max			1.8E+05	nc			

FOR PLANNING PURPOSES

Key : I=IRS R=REFAST E=ECAP F=WITHDRAWN FROUTE EXTRAPOLATION ca=CANCER PRG nc=NONCANCER PRG ss=SATURATED SOIL max=CEILING LIMIT *(nc < 100X ca) **(nc < 10X ca)

TOXICITY VALUES										SOIL FACTORS			CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)		
oSF 1/(mg/kg-d)	GRD 1/(mg/kg-d)	TSF 1/(mg/kg-d)	FRD 1/(mg/kg-d)	C ABS 1/(mg/kg-d)	V Skin (m³/kg)	V Soil (m³/kg)	CAS No.	VF		Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air Soil (mg/m³)	Tao Water (ug/l)	Tao Water (ug/l)				
2.0E-01 i		2.0E-01 r	0 0.10		108-91-8	Cyclohexylamine		1.3E+04 nc	1.0E+05 max	7.3E+02 nc	3.4E+03 nc	1.8E+01 nc	1.8E+02 nc	7.3E+03 nc				
5.0E-03 i		5.0E-03 r	0 0.10		68-005-85-8	Cyhalothrin/Karate		3.3E+02 nc	3.3E+02 nc	3.7E+01 nc	6.8E+03 nc	3.7E+01 nc	3.7E+02 nc	3.7E+02 nc				
1.0E-02 i		1.0E-02 r	0 0.10		52315-07-8	Cypermethrin		6.5E+02 nc	4.9E+02 nc	5.1E+03 nc	2.7E+01 nc	1.0E+05 max	1.8E+03 nc	2.7E+02 nc				
7.5E-03 i		7.5E-03 r	0 0.10		66215-27-8	Cyromazine		3.3E+04 nc	3.3E+04 nc	2.0E+03 nc	2.0E+04 nc	1.1E+02 nc	1.1E+03 nc	1.8E+04 nc				
1.0E-02 i		1.0E-02 r	0 0.10		1861-32-1	Dacthal		7.5E-09-0	1.0E+01 nc	3.3E+01 nc	3.4E+02 nc	1.8E+00 nc	1.8E+01 nc	1.8E+01 nc				
3.0E-02 i		3.0E-02 r	0 0.10		75-99-0	Dalapon		75-99-0	1.0E+01 nc	1.9E+00 ca	7.9E+00 ca	2.8E-02 ca	2.8E-01 ca	2.8E-01 ca				
5.0E-04 x		5.0E-04 r	0 0.10		39515-41-8	Danitol		39515-41-8	DDD	1.3E+00 ca	5.6E+00 ca	2.0E-02 ca	2.0E-01 ca	2.0E-01 ca				
2.4E-01 i		2.4E-01 r	0 0.10		6088-51-3	DDE		72-55-9	DDE	1.3E+00 ca	5.6E+00 ca	2.0E-02 ca	2.0E-01 ca	2.0E-01 ca				
3.4E-01 i		3.4E-01 r	0 0.10		50-28-3	DDT		50-28-3	Decabromodiphenyl ether	6.5E+02 nc	6.8E+03 nc	3.7E+01 nc	3.7E+02 nc	3.7E+02 nc				
3.4E-01 i		3.4E-01 r	0 0.10		1163-19-5	Demeton		1163-19-5	1.0E-02 r	2.6E+00 nc	2.7E+01 nc	1.5E-01 nc	1.5E+00 nc	1.5E+00 nc				
4.0E-05 i		4.0E-05 r	0 0.10		8065-48-3	Demeton		8065-48-3	4.0E-05 r	7.3E+00 ca	3.1E+01 ca	1.1E-01 ca	1.1E+00 ca	1.1E+00 ca				
6.1E-02 h		6.1E-02 r	0 0.10		2303-18-4	Diallate		2303-18-4	5.9E+01 nc	6.1E+02 nc	3.3E+00 nc	3.3E+01 nc	3.3E+01 nc					
9.0E-04 h		9.0E-04 r	0 0.10		333-41-5	Diazinon		333-41-5	1.0E-02 r	2.6E+02 nc	2.7E+03 nc	1.5E+01 nc	1.5E+02 nc	1.5E+02 nc				
4.0E-03 e		4.0E-03 r	0 0.10		132-84-9	Dibenzofuran		132-84-9	4.0E-03 r	6.5E+02 nc	6.8E+03 nc	3.7E+01 nc	3.7E+02 nc	3.7E+02 nc				
1.0E-02 i		1.0E-02 r	0 0.10		106-37-8	1,4-Dibromobenzene		106-37-8	1.0E-02 r	5.3E+00 ca	2.3E+01 ca	8.0E-02 ca	1.0E-00 ca	1.0E-00 ca				
8.4E-02 i		2.0E-02 r	0 0.10		124-48-1	Dibromochloromethane		2.0E-02 r	8.4E-02 r	124-48-1	3.2E-01 ca	1.4E+00 ca	2.1E-01 nc	4.8E-02 ca	4.8E-02 ca			
1.4E+00 h		2.4E-03 h	0 0.10		96-12-8	1,2-Dibromo-3-chloropropane		2.4E-03 h	5.7E-05 i	6.0E-02	"Cal-Modified PRG" (PEA, 1994)	9.6E-04	4.7E-03					
8.5E+01 i		5.7E-05 r	7.7E-01 i		5.7E-05 h	1 0.10	2.0E+04	106-93-4	1.2-Dibromoethane	5.1E-03 ca**	2.1E-02 ca	8.7E-03 ca*	7.5E-04 ca*	7.5E-04 ca*				
1.0E-01 i		1.0E-01 r	0 0.10		1.0E-01 r	84-74-2		1.0E-01 r	1.0E+00 ca	6.5E+03 nc	2.0E+04 nc	3.7E+02 nc	3.7E+03 nc	3.7E+03 nc				
3.0E-02 i		3.0E-02 r	0 0.10		1918-00-9	Dicamba		3.0E-02 r	1.0E+00 ca	2.3E+03 sat	2.3E+03 sat	2.1E+02 nc	2.1E+02 nc	3.7E+02 nc				
9.0E-02 i		5.7E-02 r	1 0.10		4.0E+04 95-50-1	1,2-Dichlorobenzene		5.7E-02 r	1.0E+00 ca	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat				
2.4E-02 h		2.3E-01 r	2.3E-02 r		1 0.10	4.0E+04 541-73-1		1 0.10	4.0E+04 541-73-1	7.4E+00 ca	9.9E+01 ca	4.2E+00 ca	1.5E-02 ca	1.5E-01 ca				
4.5E-01 i		4.5E-01 r	0 0.10		91-94-1	3,3-Dichlorobenzidine		91-94-1	1 0.10	7.6E-03 ca	1 8E-02 ca	7.2E-04 ca	1.2E-03 ca	1.2E-03 ca				
9.3E-00 r		9.3E-00 h	1 0.10		1.3E+04 784-41-0	1,4-Dichloro-2-butene		1.3E+04 784-41-0	1 0.10	1.1E+02 nc	3.5E+02 sat	2.1E+02 nc	3.9E+02 nc	3.9E+02 nc				
2.0E-01 i		2.0E-01 r	5.7E-02 h		1 0.10	1,3-Dichlorobenzene		5.7E-02 h	1 0.10	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat	2.8E+03 sat				
1.0E-01 h		1.0E-01 h	1.4E-01 r		1 0.10	4.4E+04 108-46-7		1 0.10	4.4E+04 108-46-7	7.4E+00 ca	9.9E+01 ca	4.2E+00 ca	1.5E-02 ca	1.5E-01 ca				
9.1E-02 i		9.1E-02 r	1 0.10		6.6E+03 107-98-2	1,4-Dichloroethane (EDC)		6.6E+03 107-98-2	1 0.10	8.4E+02 nc	4.4E+01 ca	9.8E-01 ca	7.4E-02 ca	7.4E-02 ca				
6.0E-01 i		9.0E-03 i	1.8E-01 i		1 0.10	1,1-Dichloroethylene (cis)		1 0.10	1.0E+03 75-35-4	3.8E-02 ca	8.2E-02 ca	3.8E-02 ca	3.8E-02 ca	3.8E-02 ca				
1.0E-02 h		1.0E-02 h	1.0E-02 r		1 0.10	1,2-Dichloroethylene (trans)		1 0.10	1.0E+03 75-35-4	5.9E+01 nc	2.0E+02 nc	3.7E+01 nc	1.2E+02 nc	1.2E+01 nc				
2.0E-02 i		2.0E-02 r	2.0E-02 r		1 0.10	1,2-Dichloroethylene (mixture)		1 0.10	1.1E+03 156-59-2	7.5E+01 nc	2.7E+02 nc	3.3E+01 nc	1.5E+02 nc	1.5E+01 nc				
9.0E-03 h		9.0E-03 h	9.0E-03 r		1 0.10	1,2-Dichlorophenol		1 0.10	1.1E+03 156-59-2	2.0E+02 nc	2.0E+03 nc	1.1E+01 nc	1.1E+02 nc	1.1E+01 nc				
3.0E-03 i		3.0E-03 i	8.0E-03 r		1 0.10	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)		3.0E-03 i	9.4E-02 nc	5.2E+02 nc	6.5E+02 nc	3.7E+01 nc	3.7E+02 nc	3.7E+02 nc				
8.0E-03 i		8.0E-03 i	8.0E-03 r		0 0.10	4-(2,4-Dichlorophenoxy)acetic Acid (2,4-D)		8.0E-03 i	9.4E-02 nc	6.5E+02 nc	6.8E-01 ca*	9.9E-02 ca*	1.6E-01 ca*	1.6E-01 ca*				
1.0E-02 i		1.0E-02 i	1.0E-02 r		0 0.10	1,2-Dichloropropane		1.0E-02 r	9.4E-02 nc	5.1E-01 nc	5.1E-01 nc	5.2E-02 ca	8.1E-02 ca	8.1E-02 ca				
6.8E-02 h		6.8E-02 r	6.8E-02 r		1 0.10	1,3-Dichloropropene		6.8E-02 r	1.1E-03 i	5.7E-03 i	1 0.10	1.2E+04 5423-75-6						
1.8E-01 i		3.0E-04 i	1.3E-01 h		1 0.10			1.8E-01 i	1.8E-01 i	1.0E+03 75-35-4	5.9E+01 nc	3.7E+01 nc	6.1E+01 nc	6.1E+01 nc				

FOR PLANNING PURPOSES

TOXICITY VALUES										SOIL FACTORS										CONTAMINANT										PRELIMINARY REMEDIAL GOALS (PRGs)									
OSF [mg/kg-d]	oRID [mg/kg-d]	ISF [mg/kg-d]	LRD [mg/kg-d]	VF Skin C ABS [m³/3kg]	CAS No.	Soil [mg/kg]	Residential Soil (mg/kg)	Ambient Air (ug/m³)	Industrial Soil (mg/kg)	Tap Water (ug/L)																													
3.0E-03	3.0E-03	3.0E-03	0	0.10	616-23-9	2.3-Dichloropropanol	2.0E+02	nc	2.0E+03	1.1E+01	nc	1.1E+02	nc																										
2.9E-01	5.0E-04	2.9E-01	1.4E-04	0	0.10	62-27-7	Dichlorvos	1.5E+00	ca*	6.6E+00	2.3E-02	ca*	2.3E-01	ca*																									
4.4E-01	x	4.4E-01	r	0	0.10	115-32-2	Dicofol	1.0E+00	ca	4.3E+00	1.5E-02	ca	1.5E-01	ca																									
3.0E-02	h	5.7E-05	h	5.7E-05	h	77-73-6	Dicyclopentadiene	2.1E-01	nc	2.1E-01	4.2E-01	nc	4.2E-01	nc																									
1.6E+01	1	6.0E-05	1	1.6E+01	1	5.0E-05	r	0	0.10	60-57-1	Dieldrin	2.8E-02	ca*	1.2E-01	ca	4.2E-04	ca	4.2E-03	ca																				
5.7E-03	h	5.7E-03	x	5.7E-03	x	0	0.10	112-34-5	Diethylene glycol, monobutyl ether	3.7E+02	nc	3.9E+03	re	2.1E+01	nc	2.1E+02	nc																						
2.0E+00	h	2.0E+00	r	2.0E+00	r	0	0.10	111-90-0	Diethylene glycol, monoethyl ether	1.0E+05	max	1.0E+05	max	7.3E+03	re	7.3E+04	nc																						
1.1E+02	h	1.1E+02	r	1.1E+02	r	0	0.10	617-84-5	Diethylformamide	7.2E+02	re	7.5E+03	re	4.0E+01	nc	4.0E+02	nc																						
1.2E-03	1	6.0E-01	1	1.2E-03	r	6.0E-01	r	0	0.10	103-23-1	Di(2-ethylhexyl)adipate	3.7E+02	re	1.6E+03	re	5.6E+00	re	5.6E+01	nc																				
8.0E-01	1	8.0E-01	1	8.0E-01	r	0	0.10	84-86-2	Diethyl phthalate	5.2E+04	re	1.0E+05	max	2.9E+03	re	2.9E+04	nc																						
4.7E-03	h	4.7E-03	r	0	0.10	56-53-1	Diethylstilbestrol	9.5E-05	ca	4.1E-04	ca	1.4E-06	ca	1.4E-05	ca																								
8.0E-02	i	8.0E-02	i	8.0E-02	r	0	0.10	43222-48-6	Difenzoquat (Avenge)	5.2E+03	re	5.5E+04	re	2.9E+02	re	2.9E+03	nc																						
2.0E-02	i			2.0E-02	r	0	0.10	35367-38-5	Diffubenzuron	1.3E+03	re	1.4E+04	re	7.3E+01	re	7.3E+02	nc																						
1.1E+01	r			1.1E+01	i	1	0.10	75-37-8	1,1-Difluoroethane	5.2E+03	re	5.5E+04	re	4.2E+04	re	6.9E+04	re																						
8.0E-02	i			8.0E-02	r	0	0.10	1445-75-6	Disopropyl methylphosphonate	1.3E+03	re	1.4E+04	re	2.9E+02	re	2.9E+03	re																						
2.0E-02	i			2.0E-02	r	0	0.10	55590-64-7	Dimethylipin	1.3E+01	re	1.4E+02	re	7.3E-01	re	7.3E+02	re																						
2.0E-04	i			2.0E-04	r	0	0.10	60-54-5	Dimethoate	3.2E+01	ca	1.4E+02	ca	4.8E-01	ca	4.8E+00	ca																						
1.4E-02	h	1.4E-02	r	5.7E-06	x	1	0.10	119-90-4	3,3'-Dimethoxybenzidine	6.2E-02	re	2.3E-01	re	2.1E-02	re	3.5E-02	re																						
5.7E-06	r			2.0E-03	r	0	0.10	124-40-3	Dimethylamine	1.3E+02	re	1.4E+03	re	7.3E+00	re	7.3E+01	re																						
7.5E-01	h	7.5E-01	r	0	0.10	95-68-1	N-N-Dimethylaniline	5.9E-01	ca	2.5E+00	ca	9.0E-03	ca	9.0E-02	ca																								
5.8E-01	h	5.8E-01	r	0	0.10	21436-96-4	2,4-Dimethylaniline hydrochloride	7.7E-01	ca	3.3E+00	ca	1.2E-02	ca	1.2E-01	ca																								
9.2E+00	h	9.2E+00	r	0	0.10	119-33-7	3,3'-Dimethylbenzidine	4.8E-02	ca	2.1E-01	ca	7.3E-04	ca	7.3E-03	ca																								
2.6E+00	x	3.5E+00	x	0	0.10	57-14-7	1,1-Dimethylhydrazine	1.7E-01	ca	7.3E-01	ca	1.9E-03	ca	2.6E-02	ca																								
3.7E+01	x	3.7E+01	x	0	0.10	540-73-8	1,2-Dimethylhydrazine	1.2E-02	ca	5.2E-02	ca	1.8E-04	ca	1.8E-03	ca																								
1.0E-01	h	8.6E-03	i	0	0.10	68-12-2	N,N-Dimethylformamide	6.5E+03	re	6.8E+04	re	3.1E+01	re	3.7E+03	re																								
2.0E-02	i			2.0E-02	r	0	0.10	105-67-9	2,4-Dimethylphenol	1.3E+03	re	1.4E+04	re	7.3E+01	re	7.3E+02	re																						
6.0E-04	i			6.0E-04	r	0	0.10	576-26-1	2,6-Dimethylphenol	3.9E+01	re	4.1E+02	re	2.2E+00	re	2.2E+01	re																						
1.0E-03	i			1.0E-03	r	0	0.10	95-65-8	3,4-Dimethylphenol	6.5E+01	re	6.8E+02	re	3.7E+00	re	3.7E+01	re																						
1.0E-01	h	1.0E-01	r	1.0E-01	r	0	0.10	131-11-3	Dimethyl phthalate	1.0E+05	max	1.0E+05	max	3.7E+04	re	3.7E+05	re																						
4.0E-04	i			4.0E-04	r	0	0.10	120-61-6	Dimethyl terephthalate	6.5E+03	re	6.8E+04	re	3.7E+02	re	3.7E+03	re																						
1.0E-01	i			1.0E-01	r	0	0.10	131-89-5	4,6-Dinitro-o-cyclohexyl phenol	1.3E+02	re	1.4E+03	re	7.3E+00	re	7.3E+01	re																						
2.0E-03	i			2.0E-03	r	0	0.10	99-65-0	1,3-Dinitrobenzene	6.5E-01	re	6.8E+01	re	3.7E+00	re	3.7E+00	re																						
1.0E-04	i			1.0E-04	r	0	0.10	528-29-0	1,2-Dinitrobenzene	2.6E+01	re	2.7E+02	re	1.5E+00	re	1.5E+01	re																						
4.0E-04	i			4.0E-04	r	0	0.10	100-25-4	1,4-Dinitrobenzene	2.6E+01	re	2.7E+02	re	1.5E+00	re	1.5E+01	re																						
2.0E-03	i			2.0E-03	r	0	0.10	51-28-5	2,4-Dinitrophenol	1.3E+02	re	1.4E+03	re	7.3E+00	re	7.3E+01	re																						
6.8E-01	i			6.8E-01	r	0	0.10	25321-14-6	Dinitrotoluene mixture	6.5E-01	ca	2.8E+00	ca	9.9E-03	ca	9.9E-02	ca																						
2.0E-03	i			2.0E-03	r	0	0.10	121-14-2	2,4-Dinitrotoluene	1.3E+02	re	1.4E+03	re	7.3E+00	re	7.3E+01	re																						
1.0E-03	i			1.0E-03	r	0	0.10	606-20-2	2,6-Dinitrotoluene	6.5E+01	ca*	6.8E+02	ca	3.7E+00	ca	3.7E+01	ca																						

FOR PLANNING PURPOSES

Key: FIRST THREE EAST @ ECAO X=WITHDRAWN FROUTE EXTRAPOLATION ca=CANCER PRG re=NOTCANCER PRG sat=SOL SATURATION MAX/CEILING LIMIT *re < 100X ca) **re < 10X ca)									
PRELIMINARY REMEDIAL GOALS (PRGS)									
CONTAMINANT									
SOIL FACTORS	V	VF	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)		
TOXICITY VALUES	VRID	TSF	RID	skin C ABS	skin (m ³ /kg)				
OSF 1/m(mg/kg-d) (mg/kg-d)	1.0E-03 i	1.0E-03 r	0	0.10	88-85-7	Dinoseb	6.5E+01 nc	6.8E+02 nc	3.7E+00 nc
			2.0E-02 r	0	0.10	di-n-Octyl phthalate	1.3E+03 nc	1.4E+04 nc	7.3E+01 nc
	2.0E-02 h	1.1E-02 i	1	0.10	117-84-0	1,4-Dioxane	1.4E+01 ca	3.7E+01 ca	6.1E-01 ca
				3.0E-04	123-91-1	Diphenamid	2.0E+03 nc	2.0E+04 nc	1.1E+02 nc
	3.0E-02 i		3.0E-02 r	0	0.10	957-51-7	1.6E+03 nc	1.7E+04 nc	9.1E+01 nc
			2.5E-02 r	0	0.10	Diphenylamine	122-39-4	5.6E-01 ca	2.4E+00 ca
	2.5E-02 i				122-56-7	1,2-Diphenylhydrazine	1.4E+02 nc	8.7E-03 ca	8.4E-02 ca
	8.0E-01 i		7.7E-01 i	0	0.10	Diquat	1.4E+02 nc	1.5E+03 nc	8.0E+00 nc
		2.2E-03 i	2.2E-03 r	0	0.10	95-00-7	5.2E-02 ca	2.2E-01 ca	7.8E-04 ca
	8.6E+00 h		8.6E+00 r	0	0.10	1937-37-7	5.5E-02 ca	2.4E-01 ca	8.3E-04 ca
	8.1E+00 h		8.1E+00 r	0	0.10	Direct black 38	4.8E-02 ca	2.1E-01 ca	7.2E-04 ca
	9.3E+00 h		9.3E+00 r	0	0.10	Direct blue 6	16071-86-6	2.6E+00 nc	2.7E+01 nc
					Direct brown 95	6.5E+02 nc	6.8E+03 nc	1.5E+00 nc	1.5E+00 nc
					Disulfoton	1.3E+02 i	1.4E+03 nc	7.3E+00 nc	7.3E+00 nc
	4.0E-05 i		4.0E-05 r	0	0.10	298-04-4	505-29-3	1.4-Dithiane	1.3E+02 nc
	1.0E-02 i		1.0E-02 r	0	0.10	330-54-1	330-54-1	Diuron	2.6E+02 nc
	2.0E-03 i		2.0E-03 r	0	0.10	Dodine	2439-10-3	Endosulfan	3.3E+00 nc
	4.0E-03 i		4.0E-03 r	0	0.10	115-29-7	115-29-7	Endothall	1.3E+03 nc
	5.0E-05 h		5.0E-05 r	0	0.10	145-73-3	72-20-8	Endrin	2.0E+02 nc
	2.0E-02 i		2.0E-02 r	0	0.10	3.0E-04 r	106-89-8	Epichlorohydrin	8.6E+00 nc
	3.0E-04 i		3.0E-04 r	0	0.10	2.1E+04	106-88-7	1,2-Epoxybutane	3.7E+02 nc
	9.9E-03 i	2.0E-03 h	4.2E-03 i	0	0.10	759-94-4	16872-87-0	EPTC (S-Ethyli dipropylthiocarbamate)	1.6E+03 nc
					1,2-Epoxyethanol	1.6E+03 nc	1.7E+03 nc	Etephenon (2-chloroethyl phosphonic acid)	3.3E+02 nc
					Ethion	3.3E+01 nc	3.4E+02 nc	563-12-2	3.3E+01 nc
					4.0E-01 h	110-80-5	2-Ethoxyethanol	2.6E+04 nc	1.0E+05 max
					3.0E-01 h	111-15-9	2-Ethoxyethanol acetate	2.0E+04 nc	1.0E+05 max
					9.0E-01 i	141-78-6	Ethyl acetate	5.9E+04 nc	1.0E+05 max
					4.8E-02 h	100-41-4	Ethyl acrylate	4.6E-01 ca	1.0E+03 sat
					1.0E-01 i	100-41-4	Ethylbenzene	2.9E+03 sat	1.1E+03 sat
					3.0E-01 h	108-78-4	Ethylene cyanohydrin	2.0E+04 nc	1.1E+03 nc
					2.0E-02 h	107-15-3	Ethylene diamine	1.3E+03 nc	1.4E+04 nc
					2.0E+00 i	107-21-1	Ethylene glycol	1.3E+05 nc	1.0E+05 max
					5.7E-03 h	111-76-2	Ethylene glycol, monobutyl ether	3.7E+02 nc	3.9E+03 nc
					1.0E-01 i	111-04-1	Ethylen oxide	1.2E-01 ca	3.0E-01 ca
					3.0E-01 h	89-03-75-21-8	Ethylen oxide	7.4E-01 ca**	3.2E+00 ca*
					6.0E-01 h	96-45-7	Ethylen thiourea (ETU)	1.1E+03 nc	2.2E+03 sat
					2.0E-02 h	75-00-3	Ethyl chloride	3.8E+03 sat	3.8E+03 sat
					2.0E-01 i	7.3E+01	Ethyl ether	3.4E+02 sat	3.4E+02 sat
					9.0E-02 h	97-63-2	Ethyl methacrylate	6.5E-01 nc	6.8E+00 nc
					1.0E-05 i	2104-64-6	Ethyl p-nitrophenyl phenylphosphorothioate	1.0E+05 max	1.1E+04 nc
					3.0E-00 i	84-72-0	Ethylphthalyl ethyl glycolate	5.2E+02 nc	5.5E+03 nc
					8.0E-03 i	101200-46-0	Express	8.0E+01 nc	2.9E+02 nc

FOR PLANNING PURPOSES									
PRELIMINARY REMEDIAL GOALS (PRGs)									
CONTAMINANT			Soil Factors						
Toxicity Values			Soil Factors						
OSF 1/(mg/kg-d) 1/(mg/kg-d)	ORID 1/(mg/kg-d) 1/(mg/kg-d)	TSF 1/(mg/kg-d) 1/(mg/kg-d)	IRID V O C ABS	VF Skin ABS (m ³ /kg)	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)
2.5E-04	2.5E-04	2.5E-04	r	0	0.10	22224-92-6	Fenamiphos	1.6E+01	nc
1.3E-02	1.3E-02	1.3E-02	r	0	0.10	2164-17-2	Fluometuron	8.5E+02	nc
6.0E-02	6.0E-02	6.0E-02	r	0	0.10	7722-41-4	Fluoride	3.9E+03	nc
8.0E-02	8.0E-02	8.0E-02	r	0	0.10	59756-60-4	Fluoridone	5.2E+03	nc
2.0E-02	2.0E-02	2.0E-02	r	0	0.10	56425-91-3	Flurprimidol	1.3E+03	nc
6.0E-02	6.0E-02	6.0E-02	r	0	0.10	66332-96-5	Flutolanil	3.9E+03	nc
1.0E-02	1.0E-02	1.0E-02	r	0	0.10	69409-94-5	Fluvalinate	6.5E+02	nc
3.5E-03	3.5E-03	3.5E-03	r	1.0E-01	0	133-07-3	Folpet	1.3E+02	ca*
1.9E-01	1.9E-01	1.9E-01	r	0	0.10	72178-02-0	Fomesafen	2.3E+00	ca
2.0E-03	2.0E-03	2.0E-03	r	0	0.10	944-22-9	Foniofus	1.3E+02	nc
1.5E-01	4.6E-02	1		0	0.10	50-00-0	Formaldehyde	9.8E+03	nc
2.0E+00	2.0E+00	2.0E+00	h	0	0.10	64-18-6	Formic Acid	1.3E+05	nc
3.0E+00	3.0E+00	3.0E+00	h	0	0.10	39148-24-8	Fosetyl-al	1.0E+05	max
1.0E-03	1.0E-03	1.0E-03	r	0	0.10	110-00-9	Furan	6.5E+01	nc
3.8E+00	3.8E+00	3.8E+00	h	0	0.10	67-45-8	Furazolidone	1.2E-01	ca
5.0E-01	5.0E-01	5.0E-01	r	1.4E-02	h	98-01-1	Furfural	2.0E+02	nc
3.0E-02	3.0E-02	3.0E-02	r	0	0.10	531-82-8	Furium	8.9E-03	ca
4.0E-04	4.0E-04	4.0E-04	r	0	0.10	60568-05-0	Furmecyclox	1.5E+01	ca
4.0E-04	4.0E-04	4.0E-04	r	0	0.10	51276-47-2	Glufosinate-ammonium	2.6E+01	nc
1.0E-01	1.0E-01	1.0E-01	r	0	0.10	765-34-4	Glycidaldehyde	2.6E+01	nc
5.0E-05	5.0E-05	5.0E-05	r	0	0.10	1071-53-6	Glyphosate	6.5E+03	nc
1.3E-02	1.3E-02	1.3E-02	r	0	0.10	69806-40-2	Haloxyp-methyl	3.3E+00	nc
4.5E+00	4.5E+00	4.5E+00	r	0	0.10	74223-64-6	Harmony	8.5E+02	nc
9.1E+00	9.1E+00	9.1E+00	r	1.3E-05	1	1024-57-3	Heptachlor epoxide	4.9E-02	ca**
2.0E-03	2.0E-03	2.0E-03	r	0	0.10	87-82-1	Hexabromobenzene	1.3E+02	nc
1.6E+00	1.6E+00	1.6E+00	r	0	0.10	118-74-1	Hexachlorobenzene	2.8E-01	ca*
7.8E-02	7.8E-02	7.8E-02	r	2.0E-04	h	87-68-3	Hexachlorobutadiene	5.7E+00	ca**
6.3E+00	6.3E+00	6.3E+00	r	0	0.10	319-84-6	HCH (alpha)	7.1E-02	ca
1.8E+00	1.8E+00	1.8E+00	r	0	0.10	319-85-7	HCH (beta)	2.5E-01	ca
1.3E+00	1.3E+00	1.3E+00	r	3.0E-04	r	58-89-9	HCH (gamma) Lindane	3.4E-01	ca*
1.8E+00	1.8E+00	1.8E+00	r	0	0.10	58-89-9	HCH-technical	2.5E-01	ca
7.0E-03	7.0E-03	7.0E-03	r	2.0E-05	h	77-47-4	Hexachlorocyclopentadiene	4.5E+02	nc
6.2E+03	6.2E+03	6.2E+03	r	4.6E+03	1	19408-74-3	Hexachlorodibenzo-p-dioxin mixture (HxCDD)	7.2E-05	ca
1.4E-02	1.4E-02	1.4E-02	r	1.0E-03	r	67-72-1	Hexachloroethane	3.2E+01	nc
1.1E-01	1.1E-01	1.1E-01	r	1.1E-01	r	70-30-4	Hexachloro-1,3,5-trinitro-1,3,5-triazine	4.0E+00	ca*
2.9E-06	2.9E-06	2.9E-06	r	3.0E-03	r	121-82-4	Hexahydro-1,3,5-trinitro-1,3,5-triazine	1.7E+01	ca
6.0E-02	6.0E-02	6.0E-02	h	5.7E-02	1	822-06-0	1,6-Hexamethylene diisocyanate	1.0E-02	nc
						110-54-3	n-Hexane	2.1E+02	nc

Key: I=IRIS T-HEAST E=ECAD F=ROUTE EXTRAPOLATION C=CANCER PRG S=SOLID SATURATION max(CEUTING LIMIT * (rc < 100X ea) * (rc > 10X ea))									
FOR PLANNING PURPOSES									
SOIL FACTORS					CONTAMINANT				
TOXICITY VALUES					PRELIMINARY REMEDIAL GOALS (PRGs)				
OSF I/(mg/kg-3) O/(mg/kg-3)	RTD mg/kg-3)	TSF I/(mg/kg-3)	RTD mg/kg-3)	VF C ABS (m ³ /kg)	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/L)
3.0E+00 i	1.7E+01 i	3.3E-02 r	0.10	51235-04-2	Hexazinone	2.2E+03 nc	2.2E+04 nc	1.2E+02 nc	1.2E+03 nc
3.0E-03 i	2.0E-03 i	0.10	7647-01-0	Hydrogen chloride	1.5E-01 ca	6.4E-01 ca	3.9E-04 ca	2.2E-02 ca	
3.0E-02 h	2.6E-04 i	1.10	7783-06-4	Hydrogen sulfide		2.6E+03 nc	2.7E+04 nc	1.5E+02 nc	1.5E+03 nc
4.0E-02 h	4.0E-02 r	0.10	123-31-9	p-Hydroquinone		8.5E+02 nc	8.9E+03 nc	4.7E+01 nc	4.7E+02 nc
1.3E-02 i	1.3E-02 r	0.10	35554-44-0	Imazalil		1.6E+04 nc	1.0E+05 max	9.1E+02 nc	9.1E+03 nc
2.5E-01 i	2.5E-01 r	0.10	81335-37-7	Imazaquin		2.6E+03 nc	2.7E+04 nc	1.5E+02 nc	1.5E+03 nc
4.0E-02 i	4.0E-02 r	0.10	36734-19-7	Iprodione		2.0E+04 nc	1.0E+05 max	1.1E+03 nc	1.1E+04 nc
3.0E-01 i	3.0E-01 r	0.10	78-83-1	Isobutanol		4.7E+02 ca**	2.0E+03 ca*	7.1E+00 ca*	7.1E+01 ca*
9.5E-04 i	9.5E-04 r	0.10	78-59-1	Isophorone		9.8E+02 nc	1.0E+04 nc	5.5E+01 nc	5.5E+02 nc
1.5E-02 i	1.5E-02 r	0.10	33820-53-0	Isopropalin		6.5E+03 nc	6.8E+04 nc	4.0E+02 nc	3.7E+03 nc
1.0E-01 i	1.1E-01 r	0.10	1832-54-8	Isopropyl methyl phosphonic acid		3.3E+03 nc	3.4E+04 nc	1.8E+02 nc	1.8E+03 nc
5.0E-02 i	5.0E-02 r	0.10	92558-50-7	Isoxaben		2.5E-02 ca	1.1E-01 ca	3.7E-04 ca	3.7E-03 ca
1.8E+01 e	1.8E+01 r	0	143-50-0	Kepone		1.3E+02 nc	1.4E+03 nc	7.3E+00 nc	7.3E+01 nc
2.0E-03 i	2.0E-03 r	0	77501-63-4	Lactofen		4.0E+02 nc	1.0E+03 nc		4.0E+00 nc
Residential PRG Based on Uptake Biokinetic Model					Lead	1.3E+02 nc	1.3E+02 nc		
1.0E-07 i	0	0.10	7439-32-1	"CAL-Modified PRG" (PEA, 1994)		6.5E-03 nc	6.8E-02 nc		3.7E-03 nc
2.0E-03 i	2.0E-03 r	0	78-00-2	Lead (tetraethyl)		1.3E+02 nc	1.4E+03 nc	7.3E+00 nc	7.3E+01 nc
2.0E-02 h	0	0.01	330-55-2	Linuron		1.5E+03 nc	3.4E+04 nc	1.0E+05 max	7.3E+02 nc
2.0E-01 i	2.0E-01 r	0	7439-93-2	Lithium		1.3E+04 nc	1.0E+05 max	7.3E+02 nc	7.3E+03 nc
3.0E-02 h	3.0E-02 r	0	83055-99-6	Londax		1.3E+03 nc	1.4E+04 nc	7.3E+01 nc	7.3E+02 nc
1.0E-01 i	1.0E-01 r	0	121-75-5	Malathion		6.5E+03 nc	6.8E+04 nc	3.7E+02 nc	3.7E+03 nc
5.0E-03 i	5.0E-03 r	0	108-31-6	Maleic anhydride		3.3E+04 nc	1.0E+05 max	1.8E+03 nc	1.8E+04 nc
5.0E-01 i	5.0E-01 r	0	123-33-1	Maleic hydrazide		1.3E+00 nc	1.4E+01 nc	7.3E-02 nc	7.3E-01 nc
2.0E-05 h	2.0E-05 r	0	109-77-3	Malononitrile		2.0E+03 nc	2.0E+04 nc	1.1E+02 nc	1.1E+03 nc
3.0E-02 h	3.0E-02 r	0	8018-01-7	Mancozeb		3.3E+02 nc	3.4E+03 nc	1.8E+01 nc	1.8E+02 nc
5.0E-23 i	5.0E-03 r	0	12427-38-2	Maneb		3.8E+02 nc	8.3E+03 nc	5.1E-02 nc	1.8E+02 nc
5.0E-03 i	5.0E-05 r	0	7439-96-5	Manganese and compounds					
9.0E-05 h	9.0E-05 r	0	950-10-7	Mephosfolan		5.9E+00 nc			
3.0E-02 i	3.0E-02 r	0	24307-26-4	Mepiquat		2.0E+03 nc			
3.0E-04 i	3.0E-04 r	0	22967-92-6	Mercury (methyl)		2.0E+01 nc			
3.0E-04 h	8.6E-05 r	0	7439-97-6	Mercury (inorganic)		5.1E+02 nc		3.1E-01 nc	1.1E+01 nc
3.0E-05 i	3.0E-05 r	0	150-50-5	Merphos		2.0E+00 nc		1.1E-01 nc	1.1E+00 nc
3.0E-05 i	3.0E-05 r	0	814-22-9	Merphos oxide		2.0E+00 nc		1.1E-01 nc	1.1E+00 nc
6.0E-02 i	6.0E-02 r	0	57837-19-1	Metalaxy		3.9E+03 nc		2.2E+02 nc	2.2E+03 nc
1.0E-04 h	1.0E-04 r	1	5.4E+03	Methacrylonitrile		1.3E+00 nc		5.1E+00 nc	7.3E-01 nc
5.0E-05 i	5.0E-05 r	0	10255-92-6	Methamidophos		3.3E+00 nc		3.4E+01 nc	1.8E+00 nc
5.0E-01 i	5.0E-01 r	0	67-56-1	Methanol		3.3E+04 nc		1.0E+05 max	1.8E+03 nc
1.0E-03 i	1.0E-03 r	0	950-37-8	Methidathion		6.5E+01 nc		6.8E+02 nc	3.7E+00 nc

FOR PLANNING PURPOSES											
TOXICITY VALUES			SOIL FACTORS			CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)		
OSF ORID (mg/kg-d) 1/(mg/kg-d)	TSF (mg/kg-d) 1/(mg/kg-d)	IRID (mg/kg-d) 1/(mg/kg-d)	V O ₂ skin C ABS (m ³ /kg)	VF C ABS (m ³ /kg)	CAS No.	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)		
2.5E-02	2.5E-02 r	0.10	16752-77-5	Methomyl		1.6E+03 nc	1.7E+04 nc	9.1E+01 nc	9.1E+02 nc		
5.0E-03	5.0E-03 r	0.10	72-43-5	Methoxychlor		3.3E+02 nc	3.4E+03 nc	1.8E+01 nc	1.8E+02 nc		
1.0E-03 h	5.7E-03 i	0.10	109-86-4	2-Methoxyethanol		6.5E+01 nc	6.8E+02 nc	2.1E+01 nc	3.7E+01 nc		
2.0E-03 h	2.0E-03 r	0.10	110-49-6	2-Methoxyethanol acetate		1.3E+02 nc	1.4E+03 nc	7.3E+00 nc	7.3E+01 nc		
4.6E-02 h	4.6E-02 r	0	99-59-2	2-Methoxy-5-nitroaniline		9.7E+00 ca	4.1E+01 ca	1.5E+01 ca	1.5E+00 ca		
1.0E+00 h	1.0E+00 r	1	1.9E+04	Methyl acetate		2.0E+04 nc	8.4E+04 nc	3.7E+03 nc	6.1E+03 nc		
3.0E-02 h	3.0E-02 r	1	1.10	Methyl acrylate		1.5E+02 nc	5.2E+02 nc	1.1E+02 nc	1.8E+02 nc		
2.4E-01 h	2.4E-01 r	0	3.5E-03	2-Methylaniline (o-toluidine)	96-33-3	1.9E+00 ca	7.9E+00 ca	2.8E-02 ca	2.8E-01 ca		
1.8E-01 h	1.8E-01 r	0	100-61-8	2-Methylaniline hydrochloride		2.5E+00 ca	1.1E+01 ca	3.7E-02 ca	3.7E-01 ca		
1.0E+00 x	1.0E+00 r	0	636-21-5	Methyl chlorocarbonate		6.5E+04 nc	1.0E+05 max	3.7E+03 nc	3.7E+04 nc		
5.0E-04	5.0E-04 r	0	79-22-1	2-Methyl-4-chlorophenoxyacetic acid		3.3E+01 nc	3.4E+02 nc	1.8E+00 nc	1.8E+01 nc		
1.0E-02	1.0E-02 r	0	94-74-6	4-(2-Methyl-4-chlorophenoxy) butyric acid (M)		6.5E+02 nc	6.8E+03 nc	3.7E+01 nc	3.7E+02 nc		
1.0E-03	1.0E-03 r	0	94-81-5	2-(2-Methyl-4-chlorophenoxy) propionic acid		6.5E+01 nc	6.8E+02 nc	3.7E+00 nc	3.7E+01 nc		
1.0E-03	1.0E-03 r	0	93-65-2	2-(2-Methyl-1,4-chlorophenoxy) propionic acid		6.5E+01 nc	6.8E+02 nc	3.7E+00 nc	3.7E+01 nc		
8.6E-01 r	8.6E-01 r	0	108-87-2	Methylcyclohexane		5.6E+04 nc	1.0E+05 max	3.1E+03 nc	3.1E+04 nc		
5.7E-06 r	5.7E-06 r	0	101-86-8	4,4'-Methylenediphenyl isocyanate		3.7E-01 nc	3.9E+00 nc	2.1E-01 nc	2.1E-01 nc		
2.5E-01 h	2.5E-01 r	0	101-77-9	4,4'-Methylenebisbenzeneamine		1.8E+00 ca	7.6E+00 ca	2.7E-02 ca	2.7E-01 ca		
1.3E-01 h	1.3E-01 h	0	101-14-4	4,4'-Methylene bis(2-chloroaniline)		3.4E+00 ca**	1.5E+01 ca*	5.2E-02 ca	5.2E-01 ca		
4.6E-02 i	4.6E-02 r	0	101-61-1	4,4'-Methylene bis(N,N'-dimethyl)aniline		9.7E+00 ca	4.1E+01 ca	1.5E-01 ca	1.5E+00 ca		
1.0E-02 h	1.0E-02 r	0	102-05-8	Methylene bromide		6.5E+02 nc	6.8E+03 nc	3.7E+01 nc	3.7E+02 nc		
7.5E-03 i	6.0E-02 i	0	101-68-8	Methylene chloride		1.1E+01 ca	2.5E+01 ca	4.1E+00 ca	4.3E+00 ca		
6.0E-01 i	5.7E-03 i	0	101-68-8	4,4'-Methyleneidiphenyl isocyanate		8.7E+03 nc	3.4E+04 nc	1.0E+03 nc	1.9E+03 nc		
1.1E+00 h	1.1E+00 r	1	0.10	Methyl ethyl ketone		4.0E-01 ca	1.7E+00 ca	6.1E-03 ca	6.1E-02 ca		
8.0E-02 h	8.0E-02 h	0	60-34-4	Methyl hydrazine		5.2E+03 nc	5.5E+04 nc	8.3E+01 nc	2.9E+03 nc		
8.0E-02 h	8.0E-02 r	0	108-10-1	Methyl isobutyl ketone		5.2E+03 nc	5.5E+04 nc	2.9E+02 nc	2.9E+03 nc		
3.3E-02 h	3.3E-02 r	0	80-62-6	Methyl methacrylate		1.3E+01 ca	5.8E+01 ca	2.0E-01 ca	2.0E+00 ca		
5.0E-03 h	5.0E-03 r	0	89-55-8	2-Methyl-5-nitroaniline		1.6E+01 nc	1.7E+02 nc	9.1E-01 nc	9.1E+00 nc		
2.5E-04 i	2.5E-04 r	0	298-00-0	Methyl parathion		3.3E+03 nc	3.4E+04 nc	1.8E+02 nc	1.8E+03 nc		
5.0E-02 x	5.0E-02 x	0	95-48-7	2-Methylphenol		3.3E+03 nc	3.4E+04 nc	1.8E+02 nc	1.8E+03 nc		
5.0E-02 x	5.0E-02 r	0	108-39-4	3-Methylphenol		3.3E+02 nc	3.4E+03 nc	1.8E+01 nc	1.8E+02 nc		
5.0E-03 h	5.0E-03 r	0	106-44-5	4-Methylphenol		2.2E+02 nc	1.2E+03 nc	4.2E+01 nc	6.0E+01 nc		
6.0E-03 h	6.0E-03 h	1	0.10	2,5-EPO/78-93-3		1.1E-02 h	1.10	8.1E+03 nc	8.1E+03 nc		
7.0E-02 h	7.0E-02 h	0	2.3E-02 h	Methyl styrene (alpha)		2.7E+04 nc	2.7E+04 nc	2.6E+02 nc	4.3E+02 nc		
5.0E-03 e	5.0E-03 e	0	5.0E-02 r	Methyl tertbutyl ether (MTBE)		1634-04-4	3.3E+02 nc	3.1E+03 nc	1.8E+02 nc		
1.5E-01 i	1.5E-01 r	0	8.6E-01 i	Meloxicam (Dual)		9.8E+03 nc	1.0E+05 max	5.5E+02 nc	5.5E+03 nc		
2.5E-02 i	2.5E-02 i	0	2.5E-02 r	Metrizobuzin		51218-45-2	1.7E+04 nc	9.1E+01 nc	9.1E+02 nc		
1.8E+00 h	1.8E+00 r	1	2.0E-04 r	Mifex		2.5E-01 ca*	1.1E+00 ca	3.7E-03 ca	3.7E-02 ca		
2.0E-03 i	2.0E-03 i	0	2.0E-03 r	Molinate		1.3E+02 nc	1.4E+03 nc	7.3E+00 nc	7.3E+01 nc		
5.0E-03 h	5.0E-03 h	0	5.0E-03 r	Molybdenum		3.8E+02 nc	8.5E+03 nc	1.8E+01 nc	1.8E+02 nc		

Key : FIRST THREE LETTERS RECORDED X WITHDRAWN IF ROUTE EXTRAPOLATION ca=CANCER PRG nc=NONCANCER PRG sat=SATURATION max=MAXIMUM LIMIT *nc TOX (ca) **nc TOX (ca)

FOR PLANNING PURPOSES

SOIL FACTORS

TOXICITY VALUES		CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)			
Key : <small>E=IRIS INFEAST D=ECOD X=ROUTE X=ROUTE EXTRAPOLATION ca=CANCER PRG sat=SOC SATURATION max=CEILING LIMIT (nc < 100X cb) (nc > 10X cb)</small>	CAS No.	V	VF	Residential Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	
OSF ORID SF	IRID C ABS (m ³ /kg)	O skin C	0.01 h	6.5E+03 nc	3.7E+02 nc	3.7E+03 nc	
1/(mg/kg-d)	1/(mg/kg-d)	1/(mg/kg-d)	1.0E-01 h	0.10	1.3E+02 nc	7.3E+00 nc	
1.0E-01 h	1.0E-01 h	0.10	10599-90-3	6.8E+04 nc	3.7E+02 nc	7.3E+01 nc	
2.0E-03 l	2.0E-03 r	0.10	300-76-5	1.4E+03 nc	7.3E+00 nc	3.7E+03 nc	
1.0E-01 l	1.0E-01 r	0.10	Monochloramine	6.5E+03 nc	6.8E+04 nc	3.7E+02 nc	
2.0E-02 l		0.01	Naled	1.5E+03 nc	3.4E+04 nc	7.3E+02 nc	
			15299-95-7	1.5E+02	8.0E-03 ca		
			Napropamide				
			7440-02-0				
			"CAL-Modified PRG" (PEA, 1994)				
			Nickel (soluble salts)				
			Nickel refinery dust				
			n/a				
			6.4E-01 l	0.01	3.9E+04 ca	4.0E-03 ca	
			1.7E+00 l	0.01	9.8E+01 nc	5.5E+00 nc	
			1.5E-03 x	1.5E-03 r	1.0E+05 max	5.8E+04 nc	
			1.6E+00 l	0.10	1.0E+05 max	3.7E+03 nc	
			1.0E-01 x	-	1.0E+05 max	3.7E+03 nc	
			1.0E-01 l	0.10	1.0E+05 max	3.7E+03 nc	
			1.0E-01 r	0.10	1.0E+05 max	3.7E+03 nc	
			5.7E-05 h	0.10	1.0E+05 max	3.7E+03 nc	
			6.0E-05 r	0.10	1.0E+05 max	3.7E+03 nc	
			5.7E-04 h	0.10	1.0E+05 max	3.7E+03 nc	
			7.0E-02 r	0.10	1.0E+05 max	3.7E+03 nc	
			7.0E-02 l	0.10	1.0E+05 max	3.7E+03 nc	
			9.4E-00 h	0.10	1.0E+05 max	3.7E+03 nc	
			1.0E+00 x	0.10	1.0E+05 max	3.7E+03 nc	
			1.0E-01 l	0.10	1.0E+05 max	3.7E+03 nc	
			2.8E+00 l	0.10	1.0E+05 max	3.7E+03 nc	
			5.4E-03 r	5.4E+00 l	1.0E+05 max	3.7E+03 nc	
			1.5E+02 l	1.5E+02 r	1.0E+05 max	3.7E+03 nc	
			5.1E+01 l	4.9E+01 r	1.0E+05 max	3.7E+03 nc	
			4.9E-03 l	4.9E-03 r	1.0E+05 max	3.7E+03 nc	
			7.0E+00 l	7.0E+00 r	1.0E+05 max	3.7E+03 nc	
			2.2E+01 l	2.2E+01 r	1.0E+05 max	3.7E+03 nc	
			2.1E+00 l	2.1E+00 r	1.0E+05 max	3.7E+03 nc	
			1.0E-02 h	1.0E-02 r	1.0E+05 max	3.7E+03 nc	
			1.0E-02 l	0.10	1.0E+05 max	3.7E+03 nc	
			2.5E-02 l	2.5E-02 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+03 nc	
			3.0E-03 l	3.0E-03 r	1.0E+05 max	3.7E+03 nc	
			2.0E-03 h	2.0E-03 r	1.0E+05 max	3.7E+03 nc	
			1.5E-03 l	1.5E-03 r	1.0E+05 max	3.7E+03 nc	
			1.0E-03 h	1.0E-03 r	1.0E+05 max	3.7E+03 nc	
			5.0E-03 l	5.0E-03 r	1.0E+05 max	3.7E+0	

FOR PLANNING PURPOSES

TOXICITY VALUES										SOIL FACTORS										CONTAMINANT										PRELIMINARY REMEDIAL GOALS (PRGs)									
oSF	oRID	ISF	TRID	T(mg/kg-d)	T(mg/kg-d)	V(mg/kg-d)	V(mg/kg-d)	O skin	O ABS	V	V(mg/kg)	CAS No.		Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m3)	Tap Water (ug/l)																						
3.0E-03	l			3.0E-33	r	0	0.10			42874-03-3	Oxyfluorfen		2.0E+02	nc	2.0E+03	nc	1.1E+01	nc	1.1E+02	nc																			
1.3E-02	l			1.3E-32	r	0	0.10			76738-62-0	Paclobutrazol		8.5E+02	nc	8.9E+03	nc	4.7E+01	nc	4.7E+02	nc																			
4.5E-03	l			4.5E-33	r	0	0.10			4685-14-7	Paraquat		2.9E+02	nc	3.1E+03	nc	1.6E+01	nc	1.6E+02	nc																			
6.0E-03	h			6.0E-03	r	0	0.10			56-38-2	Parathion		3.9E+02	nc	4.1E+03	nc	2.2E+01	nc	2.2E+02	nc																			
5.0E-02	h			5.0E-02	r	0	0.10			1114-71-2	Perubate		3.3E+03	nc	3.4E+04	nc	1.8E+02	nc	1.8E+03	nc																			
4.0E-02	l			4.0E-02	r	0	0.10			40487-42-1	Pendimethalin		2.6E+03	nc	2.7E+04	nc	1.0E+09	nc	1.5E+03	nc																			
2.3E-02	h			2.3E-02	r	0	0.10			87-84-3	Pentabromo-6-chloro cyclohexane		1.9E+01	ca	8.3E+01	ca	2.9E+01	ca	2.9E+00	ca																			
2.0E-03	l			2.0E-03	r	0	0.10			1163-19-5	Pentabromodiphenyl ether		1.3E+02	nc	1.4E+03	nc	7.3E+00	nc	7.3E+01	nc																			
8.0E-04	l			8.0E-04	r	0	0.10			608-93-5	Pentachlorobenzene		5.2E+01	nc	5.5E+02	nc	2.9E+00	nc	2.9E+01	nc																			
2.6E-01	h			3.0E-03	r	0	0.10			82-68-8	Pentachloronitrobenzene		1.7E+00	ca*	7.3E+00	ca	2.6E-02	ca	2.6E-01	ca																			
1.2E-01	l			3.0E-02	r	0	0.25			87-86-5	Pentachlorophenol		2.5E+00	ca	7.9E+00	ca	5.6E-02	ca	5.6E-01	ca																			
5.0E-02	l			5.0E-02	r	0	0.10			52645-53-1	Permethrin		3.3E+03	nc	3.4E+04	nc	1.8E+02	nc	1.8E+03	nc																			
2.5E-01	l			2.5E-01	r	0	0.10			13684-63-4	Phenmedipham		1.6E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc																			
6.0E-01	l			6.0E-01	r	0	0.10			108-95-2	Phenol		3.9E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc																			
6.0E-03	l			6.0E-03	r	0	0.10			108-45-2	m-Phenylenediamine		3.9E+02	nc	4.1E+03	nc	2.2E+01	nc	2.2E+02	nc																			
1.9E-01	h			1.9E-01	r	0	0.10			106-50-3	p-Phenylenediamine		1.2E+04	nc	1.0E+05	max	6.9E+02	nc	6.9E+03	nc																			
8.0E-05	l			8.0E-05	r	0	0.10			62-38-4	Phenylmercuric acetate		5.2E+00	nc	5.5E+01	nc	2.9E-01	nc	2.9E+00	nc																			
1.9E-03	h			1.9E-03	r	0	0.10			90-43-7	2-Phenylphenol		2.3E+02	ca	9.8E+02	ca	3.5E+00	ca	3.5E+01	ca																			
2.0E-04	h			2.0E-04	r	0	0.10			298-02-2	Phorate		1.3E+01	nc	1.4E+02	nc	7.3E-01	nc	7.3E+00	nc																			
2.0E-02	i			2.0E-02	r	0	0.10			732-11-8	Phosmet		1.3E+03	nc	1.4E+04	nc	7.3E+01	nc	7.3E+02	nc																			
3.0E-04	h			8.6E-06	h	0	0.10			7803-51-2	Phosphine		2.0E+01	nc	2.0E+02	nc	3.1E-02	nc	1.1E+01	nc																			
2.0E-05	l			2.0E-05	r	0	0.10			7723-14-0	Phosphorus (white)																												
1.0E+00	h			1.0E+00	r	0	0.10			100-21-0	p-Phthalic acid																												
2.0E+00	l			3.4E-02	h	0	0.10			85-44-9	pHthalic anhydride																												
7.0E-02	l			7.0E-02	r	0	0.10			1918-02-1	Picloram		4.6E+03	nc	4.8E+04	nc	2.6E+02	nc	2.6E+03	nc																			
1.0E-02	l			1.0E-02	r	0	0.10			23605-41-1	Pirimiphos-methyl		6.5E+02	nc	6.8E+03	nc	3.7E+01	nc	3.7E+02	ca*																			
8.9E-00	h			7.0E-06	h	8.9E-00	r	0	0.06	13336-36-3	Polybrominated biphenyls (PCBs)		5.0E-02	ca**	2.1E-01	ca*	7.6E-04	ca	7.6E-03	ca*																			
7.7E-00	i			7.7E-00	r	7.0E-05	r	0	0.06	12674-11-2	Aroclor 1016		6.6E-02	ca	3.4E-01	ca	8.7E-04	ca	8.7E-03	ca																			
2.0E-05	l			2.0E-05	r	0	0.06			11097-59-1	Aroclor 1254		1.4E+00	nc	1.9E+01	nc	7.3E-02	nc	7.3E-01	nc																			
6.0E-02	i			6.0E-02	r	1	0.10	1.4E+05	83-32-9				3.6E+02	sat	3.6E+02	sat	2.2E+02	nc	3.7E+02	nc																			
3.0E-01	l			3.0E-01	r	1	0.10	1.5E+06	120-12-7				1.9E+01	sat	1.9E+01	sat	1.1E+03	nc	1.8E+03	nc																			
7.3E-01	g			7.3E-01	r	0	0.10			56-55-3	Benz[a]anthracene		6.1E-01	ca	2.6E+00	ca	9.2E-03	ca	9.2E-02	ca																			
7.3E-01	e			7.3E-01	r	0	0.10			205-59-2	Benzol[b]fluoranthene		6.1E-01	ca	2.6E+00	ca	9.2E-03	ca	9.2E-02	ca																			
7.3E-02	e			7.3E-02	r	0	0.10			207-08-9	"CAL-Modified PRG" (PEA, 1994)		6.1E-01	ca	2.6E+01	ca	9.2E-02	ca	9.2E-01	ca																			
7.3E-00	l			7.3E+00	r	0	0.10			50-32-8	Benzof[a]pyrene		6.1E-02	ca	2.6E-01	ca	9.2E-04	ca	9.2E-03	ca																			
											"CAL-Modified PRG" (PEA, 1994)						1.5E-03																						

FOR PLANNING PURPOSES

Key: F=FIRST; E=EARLIER; W=WITHDRAWN; R=ROUTE EXTRAPOLATION; ca=CANCER PRG; nc=NONCANCER PRG; sa=SOIL SATURATION; max=CEILING LIMIT; "(nc > 1000 ng/g)" "(nc < 10X ca)" "(nc > 10X ca)"

TOXICITY VALUES										SOIL FACTORS										CONTAMINANT										PRELIMINARY REMEDIAL GOALS (PRGs)											
oSF	oRD	TSF	TRD	V	O Skin	VF	CAS No.																					Residential	Industrial	Ambient Air	Tap Water										
(mg/kg-d)	(mg/kg-d)	(mg/kg-d)	(mg/kg-d)		C ABS	(mg/kg)																						Soil (mg/kg)	Soil (mg/kg)	(ug/m ³)	(ug/g)										
7.3E+00	0	7.3E+00	r	0	0.10	3.5E+07	218-01-9	Chrysene	"CAL-Modified PRG" (PEA, 1994)										2.4E+01	sat	2.4E+01	sat	9.2E-01	ca	9.2E+00	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca			
7.3E+00	0	4.0E-02	i	4.0E-02	r	0	0.10	206-44-0	Dibenzanthracene	6.1E-02	ca	2.6E-01	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca	9.2E-04	ca						
7.3E+00	0	4.0E-02	i	4.0E-02	r	1	0.10	7.5E+05	Fluoranthene	2.6E+03	nc	2.7E+04	nc	1.5E+02	nc	1.5E+03	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc				
7.3E+00	0	7.3E-01	r	7.3E-01	r	0	0.10	193-39-5	Indeno[1,2,3-cd]pyrene	6.1E-01	ca	2.6E+00	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca	9.2E-03	ca						
7.3E+00	0	4.0E-02	e	4.0E-02	r	1	0.10	7.1E+04	Naphthalene	8.0E+02	sat	8.0E+02	sat	1.5E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc	1.1E+02	nc						
7.3E+00	0	3.0E-02	i	3.0E-02	r	0	0.10	129-00-0	Pyrene	3.0E+00	ca	1.3E+01	ca	4.5E-02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca	3.3E+02	ca						
7.3E+00	0	9.0E-03	i	1.5E-01	r	9.0E-03	r	0	0.10	67747-08-5	Prochloraz	3.9E+02	inc	4.1E+03	nc	2.2E+01	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc	2.2E+02	nc				
7.3E+00	0	6.0E-03	h	6.0E-03	r	0	0.10	26398-38-0	Prolifuralin	9.8E+02	nc	1.0E+04	nc	5.5E+01	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc	5.5E+02	nc						
7.3E+00	0	1.5E-02	i	1.5E-02	r	0	0.10	1610-18-0	Prometon	2.6E+02	nc	2.7E+03	nc	1.5E+01	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc	1.5E+02	nc						
7.3E+00	0	4.0E-03	i	4.0E-03	r	0	0.10	7287-19-6	Prometyl	4.9E+03	nc	5.1E+04	nc	2.7E+02	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc	2.7E+03	nc						
7.3E+00	0	7.5E-02	i	7.5E-02	r	0	0.10	23950-58-5	Pronamide	8.5E+02	nc	8.9E+03	nc	4.7E+01	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc						
7.3E+00	0	1.3E-02	i	1.3E-02	r	0	0.10	1918-16-7	Propachlor	3.3E+02	nc	3.4E+03	nc	1.8E+01	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc	1.8E+02	nc						
7.3E+00	0	5.0E-03	i	5.0E-03	r	0	0.10	709-98-8	Propanil	1.3E+03	nc	1.4E+03	nc	7.3E+01	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc						
7.3E+00	0	2.0E-02	i	2.0E-02	r	0	0.10	2312-35-8	Propargite	1.3E+02	nc	1.4E+03	nc	7.3E+00	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc	7.3E+01	nc						
7.3E+00	0	2.0E-03	i	2.0E-03	r	0	0.10	107-19-7	Propargyl alcohol	1.3E+03	nc	1.4E+04	nc	7.3E+01	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc						
7.3E+00	0	2.0E-02	i	2.0E-02	r	0	0.10	139-40-2	Propazine	1.3E+03	nc	1.4E+04	nc	7.3E+01	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc	7.3E+02	nc						
7.3E+00	0	2.0E-02	i	2.0E-02	r	0	0.10	122-49-9	Propham	8.5E+02	nc	8.9E+03	nc	4.7E+01	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc	4.7E+02	nc						
7.3E+00	0	1.3E-02	i	1.3E-02	r	0	0.10	60207-90-1	Propiconazole	1.0E+05	max	1.0E+05	max	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc	5.6E+03	nc						
7.3E+00	0	2.0E-01	i	2.0E-01	r	0	0.10	57-55-6	Propylene glycol	4.6E+04	nc	1.0E+05	max	2.6E+03	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc	2.6E+04	nc						
7.3E+00	0	7.0E-01	h	7.0E-01	r	0	0.10	111-35-3	Propylene glycol, monoethyl ether	4.6E+04	nc	1.0E+05	max	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc	2.1E+03	nc						
7.3E+00	0	5.1E-01	i	5.1E-01	r	0	0.10	107-98-2	Propylene glycol, monomethyl ether	4.6E+04	nc	1.0E+05	max	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca	5.2E-01	ca						
7.3E+00	0	1.3E-01	i	1.3E-01	r	1	0.10	75-56-9	Propylene oxide	1.6E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc	9.1E+03	nc						
7.3E+00	0	2.5E-01	i	2.5E-01	r	0	0.10	81335-77-5	Pursuit	1.6E+03	nc	1.7E+04	nc	9.1E+01	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc	9.1E+02	nc						
7.3E+00	0	2.5E-02	i	2.5E-02	r	0	0.10	51630-58-1	Pydrin	6.5E+01	nc	6.8E+02	nc	3.7E+00	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc	3.7E+01	nc						
7.3E+00	0	1.0E-03	i	1.0E-03	r	0	0.10	110-88-1	Pyridine	3.2E+01	nc	3.4E+02	nc	1.8E+00	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc	1.8E+01	nc						
7.3E+00	0	5.0E-04	i	5.0E-04	r	0	0.10	13933-03-8	Quinalphos	3.7E-02	ca	1.6E-01	ca	5.6E-04	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca	5.6E-03	ca						
7.3E+00	0	1.2E-01	h	1.2E+01	r	0	0.10	91-22-5	Quinoline	4.0E+00	ca	1.7E+01	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca	6.1E-02	ca						
7.3E+00	0	1.1E-01	i	1.3E-01	r	0	0.10	121-82-4	RDX (Cyclonite)	2.0E+03	nc	2.0E+04	nc	1.1E+02	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc	1.1E+03	nc				
7.3E+00	0	3.0E-02	i	3.0E-02	r	0	0.10	10453-86-8	Resmethrin	3.2E+03	nc	3.4E+04	nc	1.8E+02	nc	1.																									

FOR PLANNING PURPOSES

TOXICITY VALUES										SOIL FACTORS			CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)			
OSF	GRID	TSF	IRD	IRD	mg/kg-d ^a	mg/kg-d ^b	mg/kg-d ^c	C ABS	V	CAS No.	VF	skin	(m ³ /kg)	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)		
1.2E-01	h	5.0E-03	i	1.2E-01	r	2.0E-03	r	0	0.10	122-34-9	Simazine		3.7E+00	ca*	1.6E+01	ca*	5.6E-02	ca	
4.0E-03	i			4.0E-03	r	4.0E-03	r	0	0.10	28628-22-8	Sodium azide		2.6E+02	nc	2.7E+03	nc	1.5E+01	nc	
2.7E-01	h	3.0E-02	i	2.7E-01	r	3.0E-02	r	0	0.10	20624-25-3	Sodium diethylthiocarbamate		1.6E+00	ca	7.1E+00	ca	2.5E-02	ca	
2.0E-05	i					2.0E-05	r	0	0.10	62-74-8	Sodium fluoroacetate		1.3E+00	nc	1.4E+01	nc	7.3E-02	nc	
1.0E-03	h			1.0E-03	r	1.0E-03	r	0	0.10	13718-26-8	Sodium metavanadate		6.5E+01	nc	6.8E+02	nc	3.7E+00	nc	
6.0E-01	i			6.0E-01	r			0	0.01	7440-24-6	Strontium, stable		4.6E+04	nc	1.0E+05	max	2.2E+04	nc	
3.0E-04	i			3.0E-04	r	3.0E-04	r	0	0.10	57-24-9	Strychnine		2.0E+01	nc	2.0E+02	nc	1.1E+00	nc	
2.0E-01	i			2.0E-01	i	2.9E-01	i	1	0.10	2.8E-04	Styrene		2.2E+03	sat	2.2E+03	sat	1.1E+03	nc	
2.5E-02	i			2.5E-02	r	2.5E-02	r	0	0.10	80677-89-0	Systhane		1.6E+03	nc	1.7E+04	nc	9.1E+01	nc	
1.5E+05	h			1.5E+05	h			0	0.03	1746-01-6	2,3,7,8-TCDD (dioxin)		3.8E-06	ca	2.4E-05	ca	4.5E-08	ca	
7.0E-02	i			7.0E-02	i	7.0E-02	i	0	0.10	34014-18-1	Tebuthiuron		4.6E+03	nc	4.8E+04	nc	2.6E+02	nc	
2.0E-02	h			2.0E-02	r	2.0E-02	r	0	0.10	3383-98-8	Temephos		1.3E+03	ne	1.4E+04	ne	7.3E+01	no	
1.3E-02	i			1.3E-02	r	1.3E-02	r	0	0.10	5902-51-2	Terbacil		8.5E+02	ne	8.9E+03	ne	4.7E+01	nc	
2.5E-05	h			2.5E-05	r	2.5E-05	r	0	0.10	13071-79-9	Terbufos		1.6E+00	nc	1.7E+01	nc	9.1E-02	nc	
1.0E-03	i			1.0E-03	r	1.0E-03	r	0	0.10	886-50-0	Terbutryn		6.5E+01	nc	6.8E+02	nc	3.7E+00	nc	
3.0E-04	i			3.0E-04	r	3.0E-04	r	0	0.10	95-94-3	1,2,4,5-Tetrachlorobenzene		2.0E+01	nc	2.0E+02	nc	1.1E+00	nc	
2.6E-02	i			3.0E-02	i	2.6E-02	i	1	0.10	2.6E-04	630-20-6	1,1,1,2-Tetrachloroethane		4.8E+00	ca	1.2E+01	ca	2.6E-01	ca
2.0E-01	i			2.0E-01	i	2.0E-01	i	1	0.10	4.5E-04	79-34-5	1,1,2,2-Tetrachloroethane		9.0E-01	ca	2.4E+00	ca	3.3E-02	ca
5.2E-02	e			1.0E-02	i	2.0E-03	e	1	0.10	1.2E-04	127-18-4	Tetrachloroethylene (PCE)		7.0E+00	ca	2.5E+01	ca	3.3E+00	ca
										"CAL-Modified PRG" (PEA, 1994)					3.2E-01				
										2,3,4,6-Tetrachlorophenol			2.0E+03	nc	2.0E+04	re	1.1E+02	nc	
										p,a,a-Tetrachlorotoluene			2.2E-02	ca	9.5E-02	ca	3.4E-04	ca	
										Terachlorovinphos			1.9E+01	ca	7.9E+01	ca	2.8E-01	ca	
										3,3E+01			3.4E+02	re	1.8E+00	re	1.8E+01	re	
										Thallic oxide			5.4E+00	re	1.2E+02	re	2.6E+00	re	
										Thallium acetate			6.9E+00	re	1.5E+02	re	3.3E+00	re	
										Thallium carbonate			6.1E+00	re	1.4E+02	re	2.9E+00	re	
										Thallium chloride			6.1E+00	re	1.4E+02	re	2.9E+00	re	
										Thallium nitrate			6.9E+00	re	1.5E+02	re	3.3E+00	re	
										Thallium selenite			6.9E+00	re	1.5E+02	re	3.3E+00	re	
										Thallium sulfate			6.1E+00	re	1.4E+02	re	2.9E+00	re	
										Thiobencarb			6.5E+02	re	6.8E+03	re	3.7E+01	re	
										2-(Thiocyanomethylthio)-benzothiazole (TC			2.0E+03	re	2.0E+04	re	1.1E+02	re	
										3688-24-5			2.0E+01	re	2.0E+02	re	1.1E+00	re	
										3919-18-4			5.2E+03	re	5.5E+04	re	2.9E+02	re	
										23564-05-8			3.3E+02	re	3.4E+03	re	1.8E+01	re	
										Thiophanate-methyl			4.6E+04	re	1.0E+05	max	2.2E+04	re	
										Tin and compounds			1.9E+03	re	2.7E+03	sat	4.0E+02	re	
										Toluene			1.0E+04	re	1.0E+01	ca	7.2E+02	re	
										Toluene-2,4-diamine			95-80-7	re	6.0E-01	ca	2.1E-03	ca	
										3,2E+00	h		3.2E+00	r	0	0.10			

Key:

e=EST

g=BCAD

x=WITHDRAWN

T=ROUTE EXTRAPOLATION

ca=CANCER PRG

nc=NONCANCER PRG

sat=SATURATED

soil=SATURATED SOIL

max=SATURATING MAXIMUM

nc < TOX ca

FOR PLANNING PURPOSES										
TOXICITY VALUES					SOIL FACTORS					
OSF	oRID	TSF	TRID	V	skin	o	VF	CAS No.		
1/(mg/kg-D)	1/(mg/kg-D)	1/(mg/kg-D)	1/(mg/kg-D)	(mg/kg-D)	(mg/kg)	C	(m ³ /kg)			
6.0E-01 h		6.0E-01 r	0	0.10	95-70-5	Toluene-2,5-diamine		3.9E+04 nc	1.0E+05 max	
2.0E-01 h		2.0E-01 r	0	0.10	823-40-5	Toluene-2,6-diamine		1.3E+04 nc	1.0E+05 max	
1.9E-01 i	1.9E-01 r	0	0.10	106-49-0	p-Toluidine		2.3E+00 ca	1.0E+01 ca	3.5E-02 ca	
1.1E-00 i	1.1E-00 r	0	0.10	8001-35-2	Toxaphene		4.0E-01 ca	1.7E+00 ca	6.0E-03 ca	
7.5E-03 i		7.5E-03 r	0	0.10	66841-25-6	Traolmethrin		4.9E+02 nc	5.1E+03 nc	
1.3E-02 i		1.3E-02 r	0	0.10	2303-17-5	Triallate		8.5E+02 nc	8.9E+03 nc	
3.4E-02 h		3.4E-02 r	0	0.10	82097-50-5	Triasulfuron		6.5E+02 nc	6.8E+03 nc	
5.0E-03 i		5.0E-03 r	0	0.10	615-54-3	1,2,4-Tribromobenzene		3.3E+02 nc	3.4E+03 nc	
3.0E-05 i		3.0E-05 r	0	0.10	56-35-9	Tritylutin oxide (TBTO)		2.0E+00 nc	2.0E+01 nc	
2.9E-02 h		2.9E-02 r	0	0.10	6334-93-5	2,4,6-Trichloroaniline		1.3E+01 ca	5.6E+01 ca	
1.0E-02 i		1.0E-02 r	0	0.10	33663-50-2	2,4,6-Trichloroaniline hydrochloride		1.5E+01 ca	6.6E+01 ca	
9.0E-02 h		5.7E-02 h	1	0.10	120-82-1	1,2,4-Trichlorobenzene		6.2E+02 nc	5.9E+03 nc	
5.7E-02 i	4.0E-03 i	5.6E-02 i	1	0.10	71-55-6	1,1,1-Trichloroethane		3.2E+03 nc	3.0E+03 sat	
1.1E-02 e	6.0E-03 e	6.0E-03 r	1	0.10	1.4E+04 79-00-5	1,1,2-Trichloroethane		1.4E+00 ca	3.3E+00 ca	
3.0E-01 i		2.0E-01 h	1	0.10	76-01-6	Trichloroethylene (TCE)		7.1E+00 ca*	1.7E+01 ca*	
1.0E-01 i		1.0E-01 r	0	0.10	75-69-4	Trichlorofluoromethane		7.1E+02 nc	2.4E+03 nc	
1.1E-02 i		1.1E-02 i	0	0.10	95-95-4	2,4,5-Trichlorophenol		6.5E+03 nc	6.8E+04 nc	
1.0E-02 i		1.0E-02 i	0	0.10	88-06-2	2,4,6-Trichlorophenol		4.0E+01 ca	1.7E+02 ca	
8.0E-03 i		8.0E-03 r	0	0.10	93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid		5.2E+02 nc	5.5E+03 nc	
5.0E-03 i		5.0E-03 r	1	0.10	77-04-3	598-77-6		5.1E+01 nc	1.9E+02 nc	
7.0E+00 h	6.0E-03 i	7.0E+00 r	5.0E-03 r	1	0.10	77-04-3	1,1,2,3-Trichloropropane		6.6E-03 ca	1.5E-02 nc
5.0E-03 h		5.0E-03 r	1	0.10	1.2E+04 96-19-5	1,2,3-Trichloropropene		7.5E+01 nc	2.9E+02 nc	
3.0E-01 i		8.6E+00 h	1	0.10	3.1E+03 76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		3.6E+03 sat	3.6E+03 sat	
3.0E-03 i		3.0E-03 r	0	0.10	58138-08-2	Tridiphane		2.0E+02 nc	2.0E+03 nc	
2.0E-03 r		2.0E-03 i	1	0.10	8.3E+03 121-44-8	Triethylamine		2.2E+01 nc	8.0E+01 nc	
7.7E-03 i	7.5E-03 i	7.7E-03 r	0	0.10	1582-09-8	Trifluralin		5.8E+01 ca**	2.5E+02 ca**	
3.7E-02 h		3.7E-02 r	0	0.10	51256-1	Trimethyl phosphate		1.2E+01 ca	5.2E+01 ca	
5.0E-05 i		5.0E-05 r	0	0.10	99-35-4	1,3,5-Trinitrobenzene		3.3E+00 nc	3.4E+01 nc	
1.0E-02 h		1.0E-02 r	0	0.10	479-45-8	Trinitrophenylmethylnitramine		6.5E+02 nc	6.8E+03 nc	
3.0E-02 i	5.0E-04 i	3.0E-02 r	0	0.10	118-96-7	2,4,6-Trinitrotoluene		4.8E+01 ca	6.4E+01 ca	
1.0E+00 h		3.0E-03 i	0	0.01	7440-61-1	Uranium (soluble salts)		5.1E+03 nc	5.1E+03 nc	
7.0E-03 h		7.0E-03 r	0	0.01	7440-62-2	Vanadium		5.4E+02 nc	1.2E+04 nc	
9.0E-03 i		9.0E-03 r	0	0.01	1314-62-1	Vanadium pentoxide		6.9E+02 nc	1.5E+04 nc	
2.0E-02 h		2.0E-02 r	0	0.01	27774-13-6	Vanadyl sulfate		1.5E+03 nc	3.4E+04 nc	
1.0E-03 i		1.0E-03 r	0	0.01	13701-70-7	Vanadium sulfate		6.5E+01 nc	6.8E+02 nc	
2.5E-02 i		2.5E-02 r	0	0.10	1929-77-7	Vernam		1.6E+03 nc	1.7E+04 nc	
1.0E+00 h		5.7E-02 i	0	0.10	50471-44-8	Vinclozolin		6.5E+04 nc	1.0E+05 max	
					108-05-4	Vinyl acetate		2.1E+02 nc	3.7E+04 nc	

Key: F=FIRST RE-EVALUATION E=END-ROUTE EXTRAPOLATION T=ROUTE EXTRAPOLATION C=CANCER PRGs N=NONCANCER PRGs S=SATURATION PRGs max=MAXIMUM LIMIT (nc=NOT SATURATED) (rc=REACHES MAXIMUM)

Key : T=IRIS H=HEAST E=ECAP X=WITHDRAW T=ROUTE EXTRAPOLATION C=CANCER PRG n=NONCANCER PRG S=SATURATED SOIL nC=nC TOX (a) nC < TOX (a)									
FOR PLANNING PURPOSES									
TOXICITY VALUES					SOIL FACTORS				
V OSF ORD T/mg(kg-1) mg(kg-1)					V IF IRD T/mg(kg-1) mg(kg-1)				
skin	O ₂	V/F	CAS No.	C ABS (m ³ /kg)	skin	O ₂	V/F	CAS No.	C ABS (m ³ /kg)
1.9E+00 h	3.0E-01 h	1	0.10	2.1E+02 75-01-4	Vinyl chloride	5.2E-03	ca	1.1E-02	ca
		3.0E-04 r	0	0.10	Warfarin	2.0E+01	nc	2.0E+02	nc
		3.0E-01 x	1	0.10	m-Xylene	9.8E+02	sat	9.8E+02	sat
		2.0E-01 x	1	0.10	o-Xylene	9.8E+02	sat	9.8E+02	sat
		2.0E-00 i	1	0.10	p-Xylene	9.8E+02	sat	9.8E+02	sat
		2.0E-00 i	1	0.10	Xylene (mixed)	9.8E+02	sat	9.8E+02	sat
		2.0E-00 i	1	0.10	Zinc	2.3E+04	nc	1.0E+05	max
		3.0E-01 i	0	0.01	1314-84-7 Zinc phosphide	2.3E+01	nc	5.1E+02	nc
		3.0E-04 i	0	0.01	12122-67-7 Zineb	3.3E+03	nc	3.4E+04	nc
		5.0E-02 i	0	0.10		1.8E+02	nc	1.8E+03	nc

PRELIMINARY REMEDIAL GOALS (PRGs)

CONTAMINANT	Residential Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)
Vinyl chloride	5.2E-03 ca	2.2E-02 ca	2.0E-02 ca
Warfarin	2.0E+01 nc	1.1E+00 nc	1.1E+01 nc
m-Xylene	9.8E+02 sat	7.3E+02 nc	1.4E+03 nc
o-Xylene	9.8E+02 sat	7.3E+02 nc	1.4E+03 nc
p-Xylene	9.8E+02 sat	7.3E+02 nc	1.4E+03 nc
Xylene (mixed)	9.8E+02 sat	7.3E+02 nc	1.4E+03 nc
Zinc	2.3E+04 nc	1.0E+05 max	1.1E+04 nc
1314-84-7 Zinc phosphide	2.3E+01 nc	5.1E+02 nc	1.1E+01 nc
12122-67-7 Zineb	3.3E+03 nc	3.4E+04 nc	1.8E+03 nc